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TGCAGCACAG ACGGTCGCGG AAGCTGCGGT ACAGAAAGCG CACAGTGCgG acTGCgTGAA	21660
GTACATGTGT TTGTCAAAGG GCCGGGTATT GGGCGTGAGT CAGCAATTAG AATGCTTGGT	21720
ACCATGGGAC TGAGGGTGCG TTCGATTTCG GACATCACAC CCATTCCACA TAACGGCTGT	21780
CGTCCGCGTA AACTCGCCG CATCTGATAA AAGGAGTGAG CATGCCTCGT AGAAATCTTT	21840
TGAAGGGTTT TAAAAGACCT AAGGTGCTGG AGTTTCTTTC GGAGAACTCA AGCGAGTGTT	21900
ATGGGAAGTT CACCGCCTCT CCTTTTGAGA CTGGTTTGG CACCACTGTT GGTAAGTGT	21960
TGCGGCGCGT CTACTCTCT TCTATCCAGG GGTATGCGGT CACCGGGGT CGCATCACGT	22020
CCTTTGATGC GGACGGGGTT GCGCACTTCA TTTCAAGCGA GTTTGAACAG ATTCCCCACG	22080
TACGGGAAGA TACCCTCGAG ATTCTAAATA ATTTAAGCG TCTGCGTTTT CTCCTGCCGC	22140
AGGGGcAGAG TCTAGTACGT TCACGTATGA GTTTGCGGGC GCGgTGCTTT TGACGGGGAA	22200
GGACTTTGCT AAGAAGTTTC AACTCGAGGT TCTGTCTCAA GACCTGCTCA TCATGGAAAT	22260
GATGGACGGT GCGCATGTTG AAGTAGAGCT ACACGTCGAA TTCGGGCGTG GGTATGTACC	22320
TGCTGAATCG CACGATCGGT ATGCCGATTT AGTTGGGGTT ATCCCTGTTG ACGCAATTTT	22380
TAGTCCCGTG TTGAGAGTCC GCTATGATAT TCAGTCTTGC CGTGTAGGTC AGCGGGGGGA	22440
TTACGATCAG TTATCCCTTG AAGTGTGGAC AGATGGTACG GTGCGTCCCG AAGACGCGAT	22500
AgcCGAGGCA GCGAAAATTA TCAAGGAGCA CTTTACAGTT TTTGTTAATT TTGACGAGAC	22560
CGCGCTCGAC CTGGAGGACG AGCCAGAAGA GGATGACCCT GCCGTTCTGG AGCTGTTGAA	22620
CACGAAAATC GCTGATGTAG ATTTTTCAGT GCGCGCGCGT AACTGCCTTT TAACTATGGG	22680
AATCAAGACG CTGGGGGAGT TGACAAGGAT TTCTGAGCAG AACTTGCGA ATACGCGTAA	22740

TGTGGGTAAG	AAAAGTTTAA	GTGAGATACA	GGgCAAGTTG	CAGGAATATA	ACTTGCGTCT	22800
GGGTATGGCT	GACTACAACC	ATGTGGGGGT	TGTTAGTAGA	CTGATGCGAC	AGAAGGAAGA	22860
AATAGATGAG	GCATAGGACC	GGTTTCAACC	CGcTTTCGTG	tATGGCTGCG	CATAGGCGTG	22920
CGCTCCGTCG	CAATATGGTT	ACTTCTCTTT	TTAAGTTTGA	GCGGATCACC	ACGACGAAGC	22980
CGAAAGCTGC	CGAGGTGCGG	CGCGCGGCAG	AGAGGTTAAT	TACGCGTTCT	AAGTCTGACT	23040
CTGTGCATAA	CCGGCGCCAG	GTGGCCCGTT	TTATTTGGGA	TAAGGCTGTG	TGACACAAGT	23100
TATTTGCGGA	TATCGGACCT	CGCATGCGGG	AACGTGAGGG	GGGGTATACG	CGCATATTGA	23160
AGTTGGGCCT	CAGGCAGGGG	GATGCGGCAC	ATGTGGTTGT	GTTGGAATTG	GTGACTATA	23220
CCTTTGAAAA	AAGCCTCAAA	AAACGCGCGC	GTACTGATAG	TGTGCCTGCA	AGAAAAGGAG	23280
CTGGGAAGAA	GGaTGcTTCG	CGCGTCAGTG	GGACGGTTCC	AGACGGTCAG	TCTCAAAAAA	23340
TAGGAAAGAA	GAAAGAATAG	CAGTTGGGCA	ATGGAGGGGT	GGTATGTCGA	AGGCTCATCG	23400
TGGAAAGGGG	ATCCGGGGTA	TGGTCGGTCG	TGGCCGTGGC	GTGTGTCCGG	TGACTGGGCA	23460
GACGGGGGTA	AAGCTCCTGT	ATGAGTGCGA	GATTGATGGT	AAGAAGGTCA	AGGTTTCCAA	23520
GGTTGGGCGC	GCGACTCTCC	AGAATAGGAA	GAGACGTTTG	GATGCGCagC	CTGGAGCTTG	23580
ATCGCGCATC	CTCGTGATAT	GAGGTTCCGT	CCCAAGGACG	TTAGGTGGTT	GTCCGTTTCT	23640
GTGCTTGCCA	GTTACCATTG	GGATGCAGGT	CGCATCGTGG	TCGGTGTAGT	CAGACGGTAA	23700
ATAGGTGTTT	TCTTGACCGA	GGGCGGCGTC	TCTCGTTACT	TTTACGGCAT	TACCGCGAgG	23760
GTGTATGGC	AAAAAAGGAG	AAGAAAGTGT	GCGGCGGCGA	CGTTCAGGGG	CAGGGAGTTG	23820
CCTCAGGTTG	TGACGAGGCC	TTGGAGCGGG	CAGATAGCCT	TCGCGCGTCT	GATCCTGTAC	23880
CGGTTGAATC	GGGGGAGGGT	TCTGTTCCCTG	GGGAGCATAG	TCaGGAGTTG	GAGACAGGTG	23940
CCTCTGAAGA	GACCTGCGC	GAfCGCGTGA	ATGTTTTGCA	GGAsCAGTAC	CtGCGCAAGG	24000
CTGCCGACCT	CGAAACTAC	CGGAAGCGTG	CGTTGCGGGA	AAGGCAGGAG	gCGGTGGAAC	24060
AnCGTACGCG	GCGCTGCTTG	CCGACATCGT	CGCTGTCTTG	GATGACTTTG	ACCGTGCTAT	24120
TGAAGCGGCG	GATCACGCGT	CGAGTACAGA	GGTGGAGGCT	TCATCTGCCT	TCCGAGAGGG	24180
TGTTCTTATG	ATCCGCAAGC	AGCTCTCCTC	AGTGCTTGAG	ACAAAGTATG	GTCTTGAGTA	24240
TTACCCGGTG	CTCGGGGAGC	GCTTCGATCC	AAATCTCCAT	GAGGCTTTGA	GTATGAGTCC	24300
TTCCGCTTCT	GTGCATGAGA	AGATAGTAGG	GGCAGAGCTA	CAAAAAGGAT	ATAGGGTTAG	24360
GAACCGTATC	CTCCGGCATG	CCAAGGTTAT	GGTGCTCACT	CCTGAAGAGC	AGACAGAGCC	24420
CGATCGTGGG	GATGGcCCTT	CGGAGTGACA	GGCAGGGTAT	GCTGAGAGGT	CAGGATGGAG	24480

TTCTGGAGCA	CCGGTGCTAG	GTAACGGCTA	TACTGCGCgC	CCTGCAGGCA	GGGCGGGTAT	24540
CCTATACAGA	GGAGTTGAGG	GTTATGGGGA	AGATTATTGG	CATTGACTTG	GGAACGACAA	24600
ATTCATGTGT	TGCGATCATG	GAGGGGGGGG	AGCCCGTTGT	CATTCAAAAT	GCCGAAGGGG	24660
GAAGGACTAC	GCCCTCCATT	AyCGGTTTCA	CCTCTGATGG	TGGACGCGTC	GTCGGTCAGC	24720
CAGCAAAAAA	CCAAATGGTT	ACTAATCCGG	AACATACTAT	CTATTCGATA	AAGCGCTTTA	24780
TCGGCAGTCG	TTTCAATGAA	CTGACCGGTG	AAGCAAAAAA	GGTGCCCTAC	AAAATTGTTC	24840
CACAGGGAGA	CGACGTGCGC	GTTGAGGTGG	AGGGTAAGCT	TTACTCTACG	CAGGAGATCT	24900
CCGCGTTCAT	TTTGCAAAAA	ATGAAGAAGA	CAGCTGAGGA	TTATTTGGGC	GAGGCAGTCA	24960
CAGAGCGAGT	CATTACCGTT	CCGGCTTACT	TTAACGATGC	ACAGCGTCAG	GCAACCAAGG	25020
ATGCGGGGAA	GATAGCAGGG	CTCGATGTGA	AGCGTATTAT	TAATGAGCCG	ACTGCTGCGT	25080
CGCTTGCCCTT	TGGTTTAAAC	AAAGACTCTA	AGAGAGAGAA	GATTATTGCT	GTGTATGATC	25140
TTGGGGGGGG	TACCTTTGAC	ATATCCATCT	TGGAÄCTCGG	TGACGGTGTT	TTTGAAGTCA	25200
AGTCAACGAA	TGGGGACACT	CACCTGGGGG	GCGATGACTT	TGATGCACGT	ATCGTGCAAT	25260
GGCTGGAGCA	GGGCTTCAAG	AGTGACACGG	GTATCGACTT	GGGCAACGAC	CGCATGGCGT	25320
TGCAGCGGCT	GAGAGAAGCG	GCGGAGAAAG	CAAAGATAGC	GCTTCTCTCC	TCTGCGAGTA	25380
CCGAGATTAA	TTTGCCCTTC	ATTACTGCAG	ATGCCAATGG	GcCAAAGCAT	CTCCAGAGGA	25440
CTCTCTCTCG	ATCTGAGTTT	GAGAAGATGA	CTGATGATCT	TTTGTAGCGG	ACCAAAGAGC	25500
CTTGCCGCAA	GGnGCTCAAA	GACGCCGGAA	TTAGTGCGGA	CAGGATCGAT	GAGATTCTCT	25560
TAGTTGGTGG	TTCCACGCGC	ATGCCCAAAG	TAGCGCACGT	GATCAAAGAT	GTCTTTGGGA	25620
AAGAAGGATC	GAAGGGAGTC	AATCCTGACG	AGGCTGTCGC	AATTGGCGCT	GCAATTCAAG	25680
GAGGTATCCT	CGGGGGGGAC	GTGAAGGATG	TACTTCTCTT	AGACGTTACG	CCTCTTTCTC	25740
TAGGAATTGA	AACAATGGGC	GGGGTGTTCA	CTCCGCTTAT	CAGTCGTAAT	ACCACCATCC	25800
CCACGCGCAA	GAGTCAGGTG	TTTTCCACCG	CAGCTGATGG	GCAGACGGCA	GTTTCCATTC	25860
ACGTGCTGCa	GGGGGAGCGT	GGCATGGCGA	ACCAAAACCG	GACGCTCGGT	AATTTTGATC	25920
TAGTAGGAAT	TCCCCCTGCT	CCGCGGGGAG	TGCCGCAAAT	TGAAGTGACG	TTTGACATTG	25980
ATGCGAATGG	TATCGTGAC	GTTTCTGCCA	AAGACCTAGG	GACGGGAAAA	GAGCAGCACA	26040
TCCGCATTGA	AAGTTCGAGT	GGTCTGAGCG	AAAGTGAAAT	CGACCGCATG	GTAAAGGAAG	26100
CCGAAGCGAA	TGCAGAAAGT	GATAAGCGTG	AGCgGGAGAA	AATcGAAGCA	CGTAACGTGG	26160
CTGACTCCCT	AATCTATCaG	ACGGAAAAGA	CGCTCAAGGA	GCGGGGAGAC	GGGGTGAACG	26220

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CTGCGGACCG CGCGCGCATA GACGAGGCGA TCGCAGAGTT GAAGACGGTG CTCTCCAGGc 26280
GACGACGTCG CATCGATCAA AGCGAAGACT GAGATCTTGC AGCAAGCTTC CTACAAAATT 26340
GCGGAGGAAA TGTATAAACG TCAAGCAGCA GCGGGTGCCG CTGCAGGTAA GAAGAGTGAT 26400
GCACCCTCTG GCAATGAGGC AGAAGGTGGT GACGTTGATT ACGAGGTAGT GAAGGACGAA 26460
GATTCAAAGT AGGCATCTGG TGTGCGGGG AGGGAATAGC CTGCGTGTAG GAGCTGTGTG 26520
ATCTGACTTC CCCCAGGCCT TTTGTGATCC GGGTGTTCCG CTGATCGCCC GGGTCTTTTCG 26580
GCTGTCTAGT GGGTGTTTGG ATGTAGCCTG CGTAGGCGGT GCTTCAGGCG TCCTGCTTTT 26640
GTGCCGSTTT CGCGTGCACA CCCTGTTTTT CTGTGTGTGC GCGCAAATGT AGACAAAGAT 26700
TCTCTAGACG GGGTGATCGT GGCAAAGAAG GATTATTACG AGGTTCTCGG TATCTCAAAG 26760
ACCGCGAGTG GAGAAGAAAT CAAAAGGCG TACCGGCGGC TGGCTATTCA GTTTCATCCT 26820
GACCGTAATC AGGGAAATAA AGAGGCGGAG GAACGCTTCA AGGAGGCTAC CGAAGCCTAT 26880
GAGGTGCTCA TTGATGCACA GAAGCGTGCC GCGTACGATC GGTATGGCTT TGATGGCCTG 26940
AAGGATATGC ACGGTGCGCA TGGCTTTAAC TCTTCGGCCT TTCAGGGGT CGAAGATATT 27000
TTTGGGGGTG GCTTTTCTGA TATCTTTGAA AATATTTTTG GGAcTTCGTC TCGCCGCGGC 27060
GGTTCAGGGA ACGACGGCTC GGGTGGCTCC GGGCGTGCGG CAAACTTGCG TTATGATTG 27120
CAAATCTCTT TTGAAGAAGC AGTGACGGG AAAAGAGTG AGCTGCACTA TGTGCGCGAC 27180
GAAACGTGTA TTACCTGCAA GGTGCCGGCT CGGCCAGCGG TGGGCGTAAG ATGTGTCCAG 27240
ATTGCAAGGG TACGGGGCAG ATTCCGGCTA GTACAGGTTT TTTCTCTATT GCGCAAAGTT 27300
GTGCGCGCTG TGGTGGTGAG GGGACGATTA TCGAAAGTCC CTGTGCACGG TGTGCGGGTA 27360
GTGGCATTGA GCGTAAAAAG CAAAAAATTA TCGTCAGTAT TCCGGCAGgT GTAGAAGAAG 27420
GGCGGCGCAT TACTATTCCC CGTCAGGnAA ACGCCGGTCG CGCAGGCGGT GCCTACGGGG 27480
ACCTGTACGT GTTGTGTTT GTTCGTGCGC ATGAGTATTT CGAACGTGAA GGTGCTGACC 27540
TGTA CTGTGC AACTTCGATA TCGGTAACCC AAGCGATTTT GGGCGCGCAG GTGACGGTGC 27600
GGGCATTAGA TGGATCTGCG CACAGnTGCG GGTTCGCGCC GGCACGCAGG GAGGTGCGCT 27660
TTTGCCTGTT AAGGGTATGG GGTCCCACT GCGCGCGGG GCGGGGGATT TGTACGTAAA 27720
GGTATTGGTG CGTATTCCAA CTACGCTTTC TGCACGGTCG CGTGCGCTCT TAGCGGAGAT 27780
TTCTCAAGAG GAAGGGGAAA ACGCCCATCC GCCGTTGCTT GAACTTTCAA GTCTCAAGTA 27840
GGCTACAGAA AGGGGCGCGT GGGGTAAAAG GATTATTCTC GCGTGCGTGG TGTTCCTTTC 27900
TCGTGTGTCG CAGGATGAGT TGGcTTCATC GTGAtGGGTG CGTGTGCTAT CTGAGTTTTC 27960

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TTCCACAGT TTAAAGACA ACGTGT TTTT GAAGCAGCCA TACAAAGGGA ACGGTAGGTG	28020
ATTTCGAGAA GGCTCGCAAT TGTAAAGGCA GGTTTCATTCG CACTCCTGGC GCTTT TTTT	28080
TCAATATTTT TCGCCTTCT CAGTCCGCGG TATTCGTTTC TCGGTCGTTT CGTTTCTGCG	28140
CGCGATATGG CGCTGTTGAT TTCTCGGTAT GAGyATTTCG CTGAGCTTTC TTCGCGTGAT	28200
CGAGCCTTGC TGGTAGGTTT CGTTTTCATG ATTTTnGGT TCGGCTTACA GAAATCCAAC	28260
GCTATGCGCA CGGGCGCATC CCGTCTTGTT GTCTA	28295

(2) INFORMATION FOR SEQ ID NO: 9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5199 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

AACTTTGTGG TGATTAAGGG GTTGAGCGA TATCAACGCT GGGATCTTGC GCGGGAGTGT	60
TCTATCCGTC ATCTCTATTA TGTGTTGGAT GcTTTGCAAT TGAACGATCA AACAAAGCGT	120
GGGGTTCTGT GGGAAAGCGTA TCTGCCTACG CGTGAAGGTC CTGCACAATG GCCAGGGAAA	180
GAAGGATTTC CGCGCAGGCA ATATCTTGCG TACGCTGcGC TTTCTACTAT CACGCTTATG	240
ATAGAAAACG TTATCGGTCT TTCCATCAGT TTGCCGCGCA AAACAGTGCA CTGGATTATC	300
CCTAACCTGG AGGTGatGGG CATTGAGAAT TTGAGCTtGA AACGGAATCT CATTACGATT	360
CTCTCTTCAA AAAGTGTGCG GGGGTGGGAA GTCTATATGG AAAGCGAGAA ACTTTACTAT	420
TTTACCCTCA ACATCCTTGG ACAGAAAAAG AAGACGCTCC CAATCCCCTC GGGGAAATGC	480
TCAATGCTCG TCGATAAGTT ATAGTGCGAT AAGAAATGTT TTACGGCGCG TGGGTGCTGC	540
GCGACGTAcT GCGTTTTCTC CAGTGGCGGA GAAAGTTCTG CTAGCCCTTA GTCCAGAGAA	600
GATGGGATGC GGCTGAGGAG CTTAAGAAAG AAATCAAGTT CTGCACGTAC ACGGCAGAGG	660
AAATTATATT CTAAATATTC TGCGCGCTCT CCATCGGGAA AATGCAAGTA GAGGTAGTCG	720
CTTCTCCGTA TGAGCGCGCG GATAACGTCT TGGTTAGAAG GTGTAGCCGT GGTGAGCATG	780
TGCTTGAGCT GGAGcAACgC TGCGCGCTCT GTGGTCAATA GTTCTTTTAC GCGTAGACAA	840
AAGTCCTCTG CAGGTTTTTG AGAAAACGCA AAGGATATCT GTGCGTCTTG TGTGTGCAAA	900
ATGGGTACAT GCGTTCTATG TCTGCGCGTA CAGCAGTGGG TGATGATCTC ACACGCCTGT	960
GCGTGCGAGA CTGTGTGTGA TGTGGTAAGA GCAAGACCTT CTTGGTCTAG ATCGTAAAGG	1020

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TGCGGGTGCT	CAGCGCAGAG	GGTACGATAA	GCGTGTGCAT	AGTGCACAAG	GTTGGGGATA	1080
CTTTGTACCG	CGTATCTTTT	CCCCTTAAGG	GAGCGTATCC	CTTCTGGGAA	CAGCGCACAG	1140
TCCGGATATA	GGCTATGGAG	GCGCGTTGTG	CTGTGGTACA	GTCTTTGTAC	TGGAGCACTT	1200
CCCCTCGCAT	GGGTAAaTCC	CTTGTTCAT	GAAAAATiTA	AACCGGTGTG	AAAAATAGGA	1260
ACTCCCTTTT	TTCTCAATCG	GAGTGCAAGT	TGCAACGCGG	cGAGTCCTAC	TGATCCACTA	1320
GGATGAATGG	AAAGCGGCAC	GACGCCCgCA	TTCTGCGCaC	GTTTGATAAA	TGCgGCATGA	1380
GTGTACGGGG	TGAAAAAGAA	GTGTGTAGGC	ACGTTCTGCTG	CACGCACCGC	ACGGGGAAT	1440
GCGCTTAGAT	CCGCAAAGAG	CGCAACGGTG	CGCGGgAGTG	TACCTATGAA	TGCTTGTTCa	1500
ATCCAGAACT	GTGATCTTAA	TAAGACAAC	GCATCTGGAA	CAATGTCAGG	TAACAGTGCG	1560
TTGCACGCCA	CATCTACGGC	AAGTAAAAAG	ATGGTGTCTT	TCATGCGGGC	ACAAAAAGAA	1620
CGGCAGGCAT	CCAGCGCAGG	ACCGGCACCT	ACGATAAGGA	GTGGTTTGTG	TATACTCTGG	1680
GGAACAAGGT	GGTGTATGTG	CGAGGGATTT	TGTAATTCGG	TAATATAATT	TGAGAATATA	1740
TTGCGCGCAT	AATTCCTTCC	TGAATGGATG	AGTGTAACTT	TATTGATCCA	AAAGGTGTCG	1800
ATGAGAGTGC	GTATGTTTTG	CTCGCTTTTC	TCATAAAAAT	TCCGGTACTG	CGCATATGCG	1860
CCGGaTCCCG	CAATTTTCAG	TATCTGTTTG	AAAGGGAAGC	GGGTGAGACG	CTCCACGGTA	1920
TGCAGCACTT	GGGTGATGTG	TGTGGTGTAT	AACACGTACA	CATTCTGTGC	GGTGATAAGC	1980
TGGCGCGGAG	cGTGcTGCAT	AAAAAGGTGC	ATAAGCTGCA	GGTCACATTC	AAGACAGAGG	2040
AGAAATGAGG	AAGGAGGCAT	ACGAGTAAGA	AGCGCACATA	GGCCGTGGCC	AAGCACTGGC	2100
GCGCAACAAA	GTACAAGGGT	ATGCGGCTTG	ACCgCTAAGm	GcGCCACGGC	ncgCTCaTGC	2160
GCATCCTGTG	CGCGATACTT	TGAGTAAAGG	TAGGTGTGTC	GGTAAAGAAC	GGTGAAGCCg	2220
TTTTGTGTCT	TGATAAGACG	CGGCGGGAGC	GAGGGAACGT	CGCCACGCAC	GCCAGCGACG	2280
TCAGATGTAC	CCATAGAAGG	GAAACGCACT	CACAGCCGCG	CCACGCACAG	GgCTAGCGCC	2340
GAAAGATATT	GTCAAATGTA	TCCTTAAATG	AGGGATGAGC	CAGGATAGTA	TCTACGACCG	2400
ATTCTGTGTC	CCATGGCATC	TTTGCCGTGT	TTAGCAGCGC	AAGCGGGTAG	CCCGGGTACC	2460
AAGTGCGCAC	ATGGTGTGCA	TAGCTGTCTC	CGGTAGTAGC	GAGCACTGAT	TCGTCCACTG	2520
ACTTTTCCTC	GTGTAACGTG	AGCAGTACTA	CGGAACATATC	AAGAATAAGT	GGGTGAGACA	2580
CCTGCCCCGG	GAGAAGGGCG	AACGCGGTGG	AAAAAAATTT	CTCGTCATAT	GCAATCCGCG	2640
CTAACGGGGG	GTCGGAAGGG	CGCGGAAGGG	CAGGGAGCAC	GTCGACATTT	CCGAAATTAA	2700
TGGGAAAGGA	ACGACTCGTA	TGCACGTCTA	AGTTAAGGCT	CTGTGCGGCG	GCGGTGAATC	2760

CACCCGTGTTT	CGCCCGGGTG	GAAAAGGTAT	GTGCTTCCTC	CTCAAGGAAA	CGTTCGATGG	2820
TGCCCCGCTC	CACACGAGCC	ATGTGTGCGA	ACACGCGCTC	CCGCGTTGCT	GCGTCACTAA	2880
AGTCCGGAGC	GCTAGGTTCA	GCGTCGGTGC	GCACGATGGC	AAAACCGCGC	TCTATCTTCA	2940
CTACAGGACT	CAAGGCTCCC	ACCGCCgTGC	GgAGCACCGT	GTCCAAGTCC	TGCGCGTCGG	3000
GAAAGAATTC	GTTACATCA	CTCCGATAGG	AgTGGGTCA	TTTCCGGTA	GCATCGGTAC	3060
CAACTTTGGT	GGAGCCAGTA	GCGACAGCGT	CTTCAAAAGA	CAATTCCCGT	TTCTCTAGAG	3120
CGCGTGCCGT	GCGGCGCGCG	TcCTCTTCCG	AGGAGTAGGT	GAGCAAGGAA	AGGTGATGCA	3180
GGGTAAAAAG	GTGGGCATGC	TCTTTCCCGT	ACgCGCTGAC	GckTTCAGCG	GGAAACCGCT	3240
CTTCGCCCAA	AACGACGTAA	CGGAAGCTAC	GTTCCTTCTT	CGCCATGTCC	TGAACAAAGC	3300
GCAGTTCTCG	GCTATTGAGC	TTAAGGCCCC	CGCGTCTGT	CTCTTTTCCA	AAGAGGTGGT	3360
AAAGGTACTG	ATCGGAAAGG	AGCGAGTCGC	GCATCTTTTT	GCGCTGAGAA	AGCCGGACAT	3420
GTTCAGGGGT	GCCCTGATAG	CGCTGCGGCG	AGTAAGTACC	GTCAGCGTCA	gctAaAAAGG	3480
AGAGCACCTC	CCGATCTAGC	AGCTCCTCGC	TGAGGGTAAA	GCCGCTTGTC	TTTGTTTGCT	3540
CGGTTCCCGC	AAGCTGGACA	ACCGCGGCGC	GAAAGGCAGC	ACGTAAGACA	CGACGATCCA	3600
TCCCCCTCGC	TTCCTGAGCG	TCCTTGGGGT	ACAAGTTATA	GCGcTCCGCA	GTCTGTGCAA	3660
GCGCAGAGTA	CTGCTGGGAA	AAAAGACTAT	CAGGGGCATT	GGTGAGCGCG	ACCCCTCCCC	3720
AGGAACCGAG	TCGTACGTGG	CCGTGCCCTC	CCCCGCTGAG	GGCAGGGAGA	AACACGAACA	3780
TGAGCGCCGC	CACCGCCAAC	ACCACGCAGC	CGCCCGTCGA	GGCAAGCGCC	CCCCTGCCGA	3840
AGTAGAACGA	TTTCATGGAc	TGCGCAACTG	TGGCACAGCG	GAAGTCCCC	TGTCAACACC	3900
CGCGCAGaGT	GcCTCGGCTC	AGATCCAGTA	ATCCGTATCA	CACGAGGATC	AAGCAACTGC	3960
GTGCGTGTTT	TGACGTACCG	CGGTGATAAA	GCCTGTGCGC	CTGCAGAGAT	CGAAAAGGGA	4020
TTGGTGAATG	TGCACTTCGT	GCAttTTTTG	TACCCGTCTC	GGTCACGGCA	AATGCGGATG	4080
ATATACCCAT	CCTCTGTTTG	ACTTACGATG	GAGCAATGTG	AAGTCTCTCC	CGGATCGCTT	4140
TTGATGCTGT	ACTGCTGCAT	AAATCCCCCG	TCCCGATCTC	GGCAGACTGT	GGTATTTCCG	4200
TAAGAAATTT	TATGCTTTTG	TGTGTTGCT	TGCACTGTAT	TCCGGGAAAA	TGAGAACGCG	4260
CTGTCTTGCC	TCCCTGATAC	CGGATATAAT	GTTTCCCTCG	CGTGGCTTGG	ACGCGTGGAG	4320
GAGGATGTAG	GGTATGTCAA	TCGTGCTGCA	GGGAGTTGCC	GCAGtTCTGT	GCTTTTTTCC	4380
CTTCTGTGCC	CGGTACAGCA	ACTGAGCGTT	CCTGCGCTGC	TTGCTGCTCT	TGCAGGAGCG	4440
GCATTCTCGT	GTGTGCTGTG	CGTCGCAACG	TATGTGCTAA	CGGTGCGCCA	GCGTGCTGGC	4500

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GCTTTTGGCG TCGTGCCTAA ATGCATTGAA TACACACCCT TTGTGCTGAT GGCGTGCTTT 4560
GTCTCTCCC GCGCGTATGC GCCTACGGTG GCGATGCCGT GGTTAGATT CTTTTTGGG 4620
ATGAGTTGGA TGGTGTGAC TCTGTGTGTC TGTGCGCTGT TGTTTTGCTT GAGGAGGAAG 4680
TACGTACATC TCTTTTPTCC TCGTGGGGTT TCGGTGCACA CGCCCCCTGC GTCTTCGGAC 4740
GTGCGGAGTG TGTTGCCGGA TATGCCAGTG AGAAGGAGGC GAGGAATCTT TGTCGTACTC 4800
GAATGGGTTG ACGCGCTCAC CCAGGCTGCG TGTTCATGTC TTTTGGTGAA TTTGTTCGCG 4860
TTCCAGTTGT ACGTATATCCC GAGCGAATCG ATGGTCCCCA GCTTtATGGT CGGCGATAGA 4920
CTCTCGTGT TCAAGACCGC CTCAGGgCCT GTATTCCCGC TTTCTTCGTT TCGTTtGCCA 4980
CGCTGGCGTA CCTACAAGCG CGGAGACATC GTCGTTTTTT cCAATCCTCA TTAcCCTGAC 5040
ACTCCGCCCC CCTGACGAGC ATCACA AAAA TCGACGCTCA AGTCAGAGGT GGCGAAACCC 5100
GACAGGACTA TAAAGATACC AGGCGTTTCC CCCTGGAAGC TCCCTCGTGC GCTCTCCTGT 5160
TCCGACCCTG CCGCTTACCG GTTACCTTGT CCTGCCTTT 5199

(2) INFORMATION FOR SEQ ID NO: 10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12838 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

TCACCTCTC AAATATCATT CCGCGCGCAC CACATACCCG CAGCACACAC AACTCAACCA 60
CTCTACCCAT AACCTATACC CTTGTCAAC CCCCACCACC CGCATAAAAT TCTTTAGAAC 120
TCGCCTTTGT ACCCGCACCA CCCCTATTCA CATAAAACG CTGCCCCGGC AAAATACTCC 180
CAGGAGGAAT CGTGATACAT ACTCACACGC TCTCGCTGAG CTTTCATGCTG TTTTCATTCT 240
TCTTCGGTGC AGGAAACCTC ATCCTTCCCC CTTACTGGG AAAACACGCA GGTACGACAC 300
TCGCCACGGC GTTGCTCGGC TTTGCCACTT CCGCAGTCCT CATAACCAATC GCAGGGCTCA 360
TTACTATCGC ACACGCAGgC GGTATTGTCC CTTTGTGAGA AAGGGTAGGA AAACGCTTCG 420
CTCACTTGTA TCCGGCTATT ACTCTCCTTG TCATCGGACC GCGCCTTTCT ATCCCACGGG 480
CAGGAATCGT CCCCTTTGCG CTCGCCATCG CTCCCCTCAT CCATCGGGCG AATACCACAC 540
TACTTGCGCA stTATATATA CAACATGCTT CTTTATTGTT TCCTACTGGC TCTGCATGCG 600
CCCACACACC TTAAGCAACA CTCTCGGCAA AGTACTTACC CCCGCGCTCC TAGTACTCGT 660

TCTCCTCCTC	TTCCTTGCCCT	CCTTCACTCC	GACACTCGGT	CCCTACCTCC	CTGCACAGGG	720
CGCTTACGCT	ACCCACATAC	CCTTCAGCCA	GGGATTCTTA	GACGGTTACC	TCACCACGGA	780
TGCACTCGCC	TCCCTTATGT	TCGGCAATAT	GATCCTTACC	TATTTGCATC	GGACCCGCTA	840
CACAACCGCC	CCTTTCCCTC	CCACTCCAGC	AAACACCCCC	GCAGATATGC	GCACCGTCGC	900
CTGGATAGCA	GGGGTCATGC	TCTTTTTTAC	CTATGGAGTA	CTGGCGCATC	TCGGCGCACT	960
CAGCGCCCGC	CAACTCCCCC	ATACCGTTAA	CGGCGCGCAC	ATACTCGCGT	CGGTGTCACG	1020
CCACCTTTTC	GGAAAAGCAG	GCATCGCACT	ACTAGGACTG	ATCTTTACAA	TGCTTGCCT	1080
AACTACCTGC	GCCGGACTGC	TTGTTTGCCT	CAsGAATTAC	TTCCACAAAC	GCGCACCCCG	1140
TGTGTCTTAC	CTGTGCTGGA	TACGCCTGTT	CACCATATCC	AGCTTTGCGC	TCGCAAATAC	1200
AGGACTAGAA	CGTATACTGG	gCATACGGAA	CACCCCTACT	CATGATCCTA	TACCCAATCT	1260
CGCTGGTCCT	CATTGGCATA	TCACACCTCG	AGCGACTCAT	ACGGATACCA	CGCGCCGCCT	1320
ACCGCCTGAC	AGTATGGAGC	GCAGGAACAC	TCAGCACCTG	TGCAGTCGGT	ACGCCGCTTG	1380
TGGCGCACAC	CCGGATAGGA	CACGTGTTGA	ATACACTcAT	ACATACCCTT	CCACTCGCAC	1440
AGGAACAGCT	CTGCTGGcTT	ATCCCCAGCG	CGGCAGTTCT	TATACTTAGT	ACTGCGCATG	1500
CACGCTTACG	TGAAAAAACA	TGCACGCCCTC	GCGGTACGCT	ACCCcTCACG	GATAACTGAC	1560
CACTGGATCT	CACCATCTTG	TGGAGATGGG	GGAATCGAA	CCCCCGTCCT	AAAGAGCGAG	1620
TGcTGC GCGC	CTACAGGTTT	AGCGGTGCGT	AcTGC GTTTG	TCGGACTCTG	CTAGGCCTGC	1680
ACCGCACGCG	CCAGAGTCTT	AGCACAGACA	AAAGTCCCCC	TACGTCCGCC	GTGCACAACG	1740
TAAGAGCAAG	CTCCGTTTGG	CGTCGGGCCG	ATATGTTTCG	TCAGAGCAGC	GCAAACACAG	1800
GCcCGCGATT	ACGCGGCGAG	CGCGTAGTCG	AAACTGTCAG	AATTGGCAGT	TATAAAGGCG	1860
CCGAATCAGG	AGATCGACAC	TCCACCTGCA	GCGCAACACC	CCACATCCCT	AGTCGAAACC	1920
TAGTCATCCC	CCACAGACTG	ACGTCTGCCC	TTTTCTCTAC	ATTCCCCCTC	CCTCACCTTG	1980
TGCACCCAAC	CTAGGAGGCA	CGCTCTTCCA	TAATCGCCAC	CCCATTTGCTG	GTACCAATCC	2040
GTGCACAGCC	AAGCTCGATA	AAACGCTGCG	CCTGCGCGCG	CGTACGGATG	CCGCCTGAGG	2100
CTTTTATCTT	TGTCTCACCT	TTCAGATATT	TTTTAAAGCA	CTGAATATCC	CCTTCCGTTC	2160
CCCCGCGCGA	CGcgTAnCCG	GTGGATGTTT	TGATAAAATC	CGCGTGTCC'T	GCCTCCACAC	2220
AGGAACACGC	AAACGCGATG	TGCATCTCAT	CTAAGAGGGC	GGTTTCCACG	ATCACTTTTA	2280
CAATGGCCCC	GCGCGCGTGA	CACCGCGCTG	CAACCTGCGC	AATTTGCGGT	TCTACAACTT	2340
CTCTTTCTCC	CGCGCACACC	TTGTCTATAC	GGACGACCAT	ATCCAAC'TCT	TGCGCCCCAT	2400

CGTCCAACGC	ACGctGCGCC	TCAGCGCACT	TGACCTCCGT	GACGTGCGTA	CCAAAGGGAA	2460
AACCGATCAC	GCTGCACACC	CGCACCGCCG	TCCCCCGCAC	CGCACCTGCT	GctAACGCCA	2520
CATGGCAAGG	ATTTACACAT	ACCGACGCGA	AGCGATAGTG	TGCGCCTCTT	GGCACAGACG	2580
CAACACTTCG	GCCTCAGACG	CAGAGGGCCT	TAAGAGCGTG	TGGTCAATAT	ATGCATTGAG	2640
TTCCATGACA	CTATCCTCCC	TGGGACGGAA	TGTCAGCCGT	ACCTAGATGG	GGAAGCGGAC	2700
GCGCCACGC	CTcCGCGGAC	AATTGCCGA	TCCGCTCCTC	CCCTGCTCCG	TCATATGCTG	2760
CAAGCGCAAA	AAAATACAAA	ACGCCGTTCT	GCAGTCCCCG	CACCGTATAT	GACAAACGCT	2820
TACCCACCCG	AATAGGAGAT	CCCGCCACAA	AATACATCCC	TGACGTGTCG	CCCACATACA	2880
CCACATACCC	CTCTACGTCA	AAGTCAACCG	AAGgTGTgcC	ACGTGAGTAT	CACCGACCCG	2940
TCAGCCGCCT	GCGCAAAAAG	ACGCCCCGGG	GGCAAAGGAC	GCTCATCTTG	CTCATAATCA	3000
ACGGTTACTG	CATGCACCAC	CGGTGTCTTA	CGACCTGCAC	CATCTGGATA	CAATGCACA	3060
GCCACCTGGA	AGTATCGTCC	TTCCAATCCG	CTGAGCGGCT	GGCCTGCCAC	CACCGGCTGC	3120
CACAACGGGT	ACTCCAACGT	CCAGTCTCTT	TTCGTTTGTG	CTACTCGCAC	GAAGAACGCC	3180
ACATCTGCCT	GCTCTGGAAT	ATCCACATCT	GCATTACAC	GCCGGACCAC	CGCCTGCAGT	3240
CCTCCTGCAT	CCGTGATCTC	CGACTCAAAG	CGGCCACCTG	CCTGGTCAAA	ACGCGCAAGA	3300
CGGTTAAAAC	GGCGCAGcAC	CTCTCCTGCT	TCAGACGGCG	GAACAAATTC	TTCAGTAATC	3360
ACCACCTCAT	CGATCAGACC	AGAGTAGCGC	TCCCCGATAT	GTACTGCGGC	TGCAGCGCCT	3420
AAACGCGCAT	GCCACACCTG	GCCAGTTTCA	TCCTGCGAAT	CCGTGAGtAC	TCAAGACATT	3480
CTGTACGCCC	ATTATGCGA	TACTCAAGCA	CACCGCGCGT	TTCGTGCTAC	GTGAGCATAT	3540
GGTGGCTCCA	cCGCTCTGGC	AGCACGTGCG	TACGCGaAcG	GaGaCGCAAA	GAGACTGCCT	3600
GTCCGCGCAC	GTCATTCCAC	AAmCCCTCCG	CGCGCCAyTC	AAGCCGGTGC	TGTAAAATGT	3660
GCGCCACAAT	ATGCTGATAA	AAAGAACGTC	CGCGATCAGA	AAGAGAAGAA	CGCCACCGGa	3720
ACAACACCGC	CCCGTTCTCA	CTCACCGCAG	gATaCAGCCA	AAACTCAATG	GAGAACGAAG	3780
ACAAGGCCTG	cGACCCATAA	AAAAGAGCGC	CCGGATTGCG	CTGTAGCACT	ACCCCTTCTG	3840
CACCATCTCC	CCCCGCGGCC	CCCCCATATG	CAGATGGCAC	GGAGCGGTGC	ATCGTGCGAA	3900
ACAACGcCGC	CCCCsCTCCG	CGATGCGCAC	GCTCTTCGCC	CACATGtGCG	CAGAGGAGGA	3960
CTGCACACGA	TAACGACCGT	ACAAATCGCT	GACCAACGGA	TcATCAAAAC	TAAGATACAA	4020
GTCACCCCGA	AACTGCGGG	TACGcGCAgC	AGaAGAAAGT	TCAAGCGCCG	GATGGCCCGC	4080
TCGCCCCACA	CGCGTACGCA	GGTTTTTTAC	CCGTGTAAGC	GACTGCCACC	CcTGCGCACC	4140

CCCCAGCAgC	AGTGCgCTTC	CTTTGCATAC	AGCACACCCG	CaGCATTCCC	CTCCCCsynC	4200
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CCGAGTATCG	GCCTTTCCAC	ACGAATAATC	AATAATGAGC	GCTCACACAG	CTCCCACACC	4320
GTACAGAACC	AGAGCTGCAC	GCAAAGCCcG	CGCAGCgctT	TGTATGTACG	CGCACGGTAC	4380
ACCCcAGGGA	AAAAGAGCGT	CTCCTCAGCA	GACAGCGAAA	ACGAATGGGC	ACTCCGCTAC	4440
AACGGTTcAG	CCTAAGGGCA	AACCATCACC	CTTACCCCGG	CGCATGGTcA	CGTAGCGGTT	4500
CAAATCCGTC	ATATTTTTAA	CTACTATCCG	GCGCTCTTGC	CACTCAACCT	TCCGCTGATC	4560
AGAAAGCCTG	CGCAGCGCGT	CCTGTACCTC	CCTGTcAGAA	AGACCAGCCC	ACCGGGCTAT	4620
CTCTTCGATG	CTGATATCAA	AAGAACGCGC	GTCGCTGCTG	CGATCCACGT	GCGGTTGCGT	4680
TTcATCCAAC	ATCAAGAAAA	CATCCCCCAC	ACGCGCAGTA	CTATCTTGAA	TCGTTAAAAT	4740
CATAAAACGC	CGCTTCTGGG	TGTAAATACG	CCGCACAAAC	GTTTTCAAAA	GCCGCATTGC	4800
AATAGCAGGA	TTACCCATCA	TGAGCACTTC	GAAATTCTCC	CGATTGAACT	CCAGCGCCAC	4860
AACATCGTCG	TACGCAACCG	CAGACGCCGA	ACGCGGTGAG	TTGTCGAGAA	TAGACATCTC	4920
TCCAAAAATC	TCCCCCGGTT	GCAACACATC	CAAGTAGCGC	TCCTTTCCGT	TGATAATTTT	4980
AATTAGACGC	ACCCGCCCGC	TCTGCACGAG	GTAGAAACTC	TCCCCCACAT	CAAACCTCTGC	5040
GAAGATAACA	GAACCCCGCT	GAAACTTTTT	GGCAAAGCGC	GTAAACGAGG	CAAAGGCATC	5100
AGCCATGCGA	CGCCTCCTCA	CAGGAACGCT	GGAGCTCTTT	TATGCGCGGA	ACTAAAGACT	5160
CAGGAGCGGT	AGAAAGCGCC	TTGTcGTAAA	AAGAAATCGC	CTTATCCGGC	CTCCCCATAC	5220
CCTGATAGCA	CTGTCCCAGA	TACATCAGCA	CCTCCGCAAG	ACGCGTAGAC	TTCGGATTGC	5280
GGGTAAATGCA	CTCAGTGAAC	GTCTGAATGC	TCCGCACAAA	CTCCCTCTGC	TCAAAAAGAC	5340
ACCGCCCCGC	ACCCAGATAC	GCAGCCTCCG	CGCCCACTCC	CCCGTTcGAC	GCGCACCCTA	5400
ACCGGTAATG	CTCATAGGCC	TCACCCCACT	TTCCCTGTTG	CTCAAGAAGC	TCTGCGGCAC	5460
GCAktCCCCC	ACTTCAGAAT	CGACAGCTGA	CTCAGCAAAA	GCAGAAGGCA	CCTCAAAACC	5520
CGCATCCGAA	CcTTGCGCAC	CCGCCTCCTC	AAAGCCGCGC	CCGACTGTAC	CGTCGGCGCT	5580
CTCAAGCATC	GACGCAATAT	CGTGCCGATG	CTTTCCGTCC	GGATACAGTT	CCCGGTAAACG	5640
cTGCGCCACC	TGACTTGcAG	CAAGGTAATG	CTCAGAGGCG	TGAAAGGCAC	GGGCAACGGT	5700
GTACAAACCC	TCCTCGTTAT	TTGTCTCCTC	CTGAGAGTCA	AGGAGCGACT	CAAGCTGCCG	5760
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CGTTTGAGCA	AAGGCTTCAA	ACTCCTGACT	CCCAAACGCA	TACACAATCG	AATCCACCAA	5880

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ACCAGTTTTA ATGTACTCAG TCACCTGCGA CCCTGTTTCG ACATCCGCAA AGGTAAGCGC	6000
CACGTGCCCC TTATTTCAGGA TCATAACACG ATCGTCAAGA TCGCCTGAAA AATAGATAAC	6060
CGAATTGGCC TTATACTGAA TGGCTTTTGG CACGTCTGCC TCCGTCTTCC ACGCGACACC	6120
GAGAAAAAGC GTGGCTCCCA CGGTACATTT TCGATAGAAC GGTCAATGCAC TTAAGTCTTT	6180
TTCCAGAATT CACGTACACG GCTCCTGCGG CnACACCTGC AGAGATCGTT CGCACGCCTT	6240
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GTGGCTACG GCGTCCTCCA GTGGTCCCTC CCAGATCTGG GACTGAGTAC AGGAGACATC	6420
CTGCCGGTGT ACGTGCCTC AAACGTCTCC CAAGTGTACA TTGTGGAAT CCAGAAGAAA	6480
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CACGTGATCG CGACCTTCAG CACGTACTCA ACTCTGCGTG GTATCCTGAA TACTACCGCA	6900
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ACTCCCGTCT GGTAAAAACC GGATCCAACG GTACCTCTT TGACGGATCC TCTCTGAGCA	7080
TCTATGTTTG GGACGCGCAC ACCCTTGCCG CGCAGTTCAC TGACGAAGCT GGGCGCTGC	7140
GCATAGAACG CTTGTCACCT CTGGAGAAAA CGCCTGAAGA GATTATCGCA GAAGAGCAGC	7200
TGCGGCGCAG TGCGCTTTTG GAACACGTCT GCACACCAGG ctGCGCCTTC ACTCTGAGAT	7260
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GTCCCCGGCG CTTATCCCCG CAGGGGCAGG GAGCACGGGG CGTGTAGCAC TGCGGTGCTT	7380
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GCAGGAATGG GTGCACTTCC TGTACTTACG CACCCCCGGG GGGCTAAAGC TCGAACACAT	7500
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TATTCGCGCC GGAAGGACAC GCCGAGCCCC AACCCTAAGA AGCAGTCAGC CGTCGGGAAG	7620

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CTAATGCGGT	CTGGATGCGT	TACCACGCCC	TACTACAGG	CCATAATAAT	GGGGAATAG	7980
TATCCGCGGA	TGCGCGAGCC	GTA AA ACTTT	TTAGCAATTT	GAGAAAGGGT	GTCTTCGTTT	8040
TTGACCACGT	ACTCAGCAGC	CGACACCTCT	TGCGGAGgAC	TGCCATAGGC	TcTGCGGT	8100
CCTCGGGGAC	GGGCGTCATG	GGCTCTTCTT	CCTGCTCCTC	CACAGGCGGC	GCAACTTCCA	8160
CGAGCTCCTC	CGCCGGAGcc	AGACTTG CAG	GACGTAACAC	CCGAGATAAA	CGCAATCCAC	8220
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CCTCATGGGG	AAAATCATAC	GGCATACTCT	TAGCAAGCGC	ACACACCGTC	CTTCCCACCT	8400
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ATCCGGACGA	AGTTATTGAA	AATATTCATT	GGCTTGAGCG	CGCTGTACAC	GCCGACTTCG	8700
CCAATCCCCT	TTATGCACTT	GCGCCTATTC	GCGATAAAAA	AAGCTGGGAA	AAATACCGCG	8760
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CTTGGAAGA	CGAGCGAGAA	cGCATCGCGC	GCGGCACGyt	CAACTATGCG	CGTACCATAT	9060
CGCGCGAGtC	GCACGTCTCG	AGGCGGTGCG	TGCTCgCTTC	ATGGAGATGA	ACGACACCTA	9120
CTGAGAACGA	ACTCCACCGG	TACCAGGCGA	CACTGAACAC	TTACATCGCC	TGGACTACAC	9180
AGAAGCCGGT	CAATAGCGGG	CGGGTTTGCC	CAGAACTTt	ACCCCAAGAT	CAGGAAAATC	9240
CGTGAGCACC	ACGTTTGCGC	CCGTCGT TTT	GAACAAAATG	GAAAACATCT	CGTCCaTGGT	9300
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TCTATGAGCA TCCTCCAGTC AGGACCCACG CCGTCTGCAT ATTTTGCTAT TTTCTGCATA	9480
CCACCGGGCT CAAACATCCA ATTGTAATTG TAGTTTATCC ATTTCCCACG CGAGTCCTTC	9540
TCCTGTGTTT CACGTTGATC TGTGTAAGCA ACACGCTGAA TCAGCTTCAC GTTCATTTCTG	9600
TACTTTGGTA AAAGTTCTCG TTTGATACGC TTCAGCTCGT TAAAATCATA CGTTTGCACA	9660
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GCGATGTCTT TTCCTTCCTG ATGATGAAAC CACGGCACCT TTATTTTCAGA GTAAATTCCA	9780
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ACATCCTGCT GCAGSTAATC TGCTCCTtGT GCAAAAGCAA GAACTTTTCGA GGCAAAGGTG	10140
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CCTGCAACCA AKGCCGAAA CACCCCCCCC CAAAGCGTCA CACAATATGT TCCCCGCATA	10260
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AAAAGCAGCA CCGACGCGAT AGACACCACA CGCCCCACAT TGGcAGCAGG AAAGTACATA	10920
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GCAGTATAAA AGTCAGAAAG CCTCATACTC ACCTAGGGGA AAGACGTAAT GGTACACCAC	11040
AGGTGTACTc CTAGCCTCGA ATTTTGATC GCCTATTGAA CCTGTCAATG CGTCCTGCTG	11100

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AATCTACCAG	TTTCTGTTTA	CCGGTAAAAA	ACGGATGGCA	CGCAGAACAA	ATCTCTACCC	11160
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TCTCCTCGTA	CCGAGGATGC	AGTCCCTTTT	TCATCTGAAT	CGCTCCTTTC	CCCATTTCTAC	11280
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GGTGTAAACG	ACACACGTTT	CAGTCTCCTT	ACTCAGGAGG	AGAACGCACC	CGTATTTCATA	11400
GACCTCAAAA	ATGCCTCGTT	GTTCTTTGTT	TTACGCATCT	TATCAATTAA	CAATTCCACA	11460
ATTTCTGCAT	CGTCCATAGG	ATTGATTACC	TTACGCAACA	CCCAAATACG	CTGCATTTCT	11520
TCCTCCGTCA	GGrGCAACTC	TTCTTTACGC	GTACCAGACT	TTTTAATACT	CACCGCGGGA	11580
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ATTGTcAGAC	TTCTCCTTTC	CTCCACATG	CGAGCTGCAC	CAAAGAAGCG	TTTCGGTTTG	11760
TGCAGAGCAT	TTGAATCCAC	TCCCCCGAC	AACACTTTAC	CTGAAGTTGG	CATCGTTTGG	11820
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TCTACCAATC	GCTTTGCGCG	CTCAAGCACT	ATCTCTGCAA	TCTGTACATG	GCGAGTAGCC	11940
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TCCGTTCCTG	TTTCTAAATT	CAGCTTTTCC	CGCGGGTACA	AAGGGGTAAG	ACTGTCGAAA	12240
GGGACACGGT	CCTGTACCTT	TGCTACTTCT	TCGAAGTTTA	CCGTTTCCAC	GCGGAgcATT	12300
GCAAAGAAAC	GCTCTCCCTC	CTTAGGGGAG	CGAATCTGCC	CATAGATGGT	GTCGCCCGTT	12360
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TAACGTGTTCT	GAGGTGAACG	CAAAAAACCA	TACCCGTCAG	GCAATATCTC	CAGCGAGCCA	12480
GAAGCAAAGA	TAACGCCACC	ATTCTCAGTG	TGATTTTTAA	GAACGTGAAA	GATGATATCT	12540
GACTTTTTCa	TGACAACCAC	GTCTTCTTGA	GAGATACCCC	GCTGTACTGC	AAAATCACGC	12600
AGGgCATGCA	TCCCCATCTC	AGTTAAATCA	TCAATCAGCA	AACGCGCCCT	ACCCTTAACG	12660
TCGGCGGAAG	ACTCACTTGT	TTCCGCATCT	TCTGGGCAGA	AATTTTGCTT	AAAGCGTAGG	12720
GCTCTTCGCG	GACGTTTTTC	CACCTCCAGC	GCTTTTGCGC	TCACCACTCG	TCTCCGTGAG	12780
CGAGAGsGgA	TGACGAGCTT	CTTCCTCCCG	CCGTAGATCG	CATTCCCCCA	CGTCAGCG	12838

(2) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17378 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

TGCGCGTGTG CCACGCACAC CAGTACGTAT GCTCGAGCAC AGTGGTCACG TGATCACTGA	60
TGACGTGGAG CGGGAGCAGG TTGCCTCTTG TGTCAGTGCT TTTTACGCA CGTAnTtTAC	120
GTGATGTCTA CCCAAAGGG AGTGCGGTGC ACNgTGCTC CACATTtCTA GTTGCTGTAG	180
GGGAAGAGA CTGAGTCGCT GTTTCGGACC GCGTGCGTTT TATGTGCGCG CGCTGTGCAT	240
CGCGCTCCCC GTGATGCTGC ACTCCTTCAT CCAGACGGGT ATTTCTTTTT TAGACAACGT	300
TATGGTCTCC CGTTTGGGG ATGTGAAGAT GGGTGCAGTG AATGTGGTCA ACTCGCTGCT	360
CTTtCTGTAT GTCACCGCGT TAATGACCGT GTCGAATGCA GGCAGCGTGT TTATGACGCA	420
tACTCAGGAG CCCGTCACGT AkGGGCATGC GGCAAAGCTA CCGATTtAAA CAGTACGCCA	480
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CGTGTtTGTT GGGAAAAAAT GCGCAGGCTG CTCAGATTAT AGCGGAAGgT GAGCGTTACC	600
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TGCCAGAAAC AGGGAAGGTG CTTGTACCGC TTGCAGTGTA CGGGTGCAGT GCCGTATTGA	720
ACGCAtGrGT aATaTATGTt GATTtATGGA AACTGGGGG CTCCGCGATT AGAAGTGCAA	780
GGTGCAGCAT GtGCAACGCT TATAGCGCG GTGGTAGAAA GTCTTATGCT CCTGGTGTAT	840
GTGCGGGTTA AAAAACCGBA CTTTtATGTG CGGCTTTTTT GTCcTGTGCG ATACCCCTGT	900
CACTGTGTAC GGTGATGCTG AGAAAATCGC TGTGGATTtT CGTAGGAGAC ATGGCATGGT	960
CGGTAACGBA GATGGCCGTG GCTGCCTTGT ATCACAGCCG TGGTGGGGCT GAGGTtGTGG	1020
CAGGGATGTC GCGGGGTGG AACTCGCGC AATTATTtTT TCTATCATTC CCTGCAAGTA	1080
GCGTGCAAT TACCATtTTG GTCGGGATG TGTtAGGGAA AAGCGAGCTA AAGCAGGCGC	1140
AGGATTATGC cACGGTGGTt GATGAACGBA GCGTtCTTTT TAgGGTtAGG TTTGGGTGTG	1200
AtTGTGTGTG TAGCGCGTGC aGGGATTCCG TGGGCTTTtG GAGATTtGTC GCaTgcTTcG	1260
CAACGTATAG CACAGCAGTt GTGCTCGTG ACGGCGCTGT ATATGCCGAT TTGGATGTAT	1320
TTAAATGCGC AGTATGCGGT GGCACGTGCA GAGGTGAAG TGATGGTCAC CGCGTGGACA	1380

GAAACGTTGG	TAGATACCCT	GTTGTTTTTG	CCGTTGATGT	ATGTGTTGGC	GCGCTTCACT	1440
CAGCTTGGTG	CGCCGCTTAT	STATGGAATA	GTAAAGAGTA	CAAGTGTAGT	AAAAATGGTG	1500
GTGCTTGCAC	GTCACCTAAA	AACACGTCGT	TGGGTGCGTA	ATCTCGTGGC	GAATTTATCG	1560
TGATACGTGT	TACGTCTTTC	GGGTAAGGCA	CGGAGCATGG	AGTGACGGAA	ATCGAAGCAT	1620
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CCCAGGGGTG	GCTGCGGCAA	AGTCTTTCTC	TGCTTGGTGT	GCGTACGGTT	CCGGGGCGGT	1740
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CGCGGCAGGC	TGCAGAGGGG	CGCGCACTTT	TTTGCAACCT	TATTCCTCCG	GCATATGCGC	1920
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AACGGCGCGT	TGAATCGCAC	TGCATGCCTC	CAAAAGATGC	GGTATCGCGT	AATACGTTTG	2040
ATGgYcSCGA	CGCGCgCGCG	TATGccAGAg	TGCGGAGGCG	CAAGATTTAC	AAACGCTGAA	2100
AGgCaCTATG	AGCAATTTCT	CCGCGCGCAT	GCACTCTTTG	AACCTTCCTG	GGATACGCCG	2160
CAGTTTTGTG	CGCAGGGGAA	CACGTATGTC	ATTGTATACC	CGCAGCTGAT	GCAAGACTTT	2220
GCAGAGTATG	CACCGGTATT	GCAAGAAGCG	GCGCGCGCCA	CTGCGGGAGT	ACTCACCTTT	2280
CTTCCGGTTC	CTCCCTTTTCG	GCAGGATACG	CCGTTGTGTT	GTTTTTCGAA	TGTACGTGAG	2340
GAAATTACTG	CCGTTGCGCT	CCAGGTAGAG	AGGTTGTTGC	GCACGGGAAC	GCCTGTGTGC	2400
CAGATAGCAG	TTTCGGTGGC	AAATTTAGAA	GAATGCGAGC	CATATGTGGA	GCGTGAGTTT	2460
CGTCTGCGTG	ACATTGAGCC	TGAGGTGCGG	GCAGGTTTTT	GTCTTGGTGC	TCATCCGGCA	2520
GGGAGGATGT	TTTCCCAAGT	TCGAGAGTTT	GTGCGCAGTC	ATGgCACGCT	CAAAAGCGTG	2580
CGGGcGCTGC	TTTTGAATCC	GCATATTCGC	TGGGCGGACC	CCCAAGGGGC	ACAGGCTGTG	2640
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CAGCAGTGTG	CGCAgcGATT	TTTTCTGACG	CTGTTACGTT	TTGCGCGCGC	GTTGGTTGAG	2820
GCGCGTAgTT	TCGTACGGAT	GCAAAAGGcc	TACGGTGCGT	TTCGTGCCGC	TTGTTTGCTC	2880
CCCGCGTCAG	CraCACGTCT	GGTGCAGAAG	AGGAGATAGC	ATCGTCTGCG	TTTGCGTCTT	2940
GCAGTGCTGG	GGAAGACGAT	GCGGTGATGG	CGCGGTGCGT	CTGTGTTTTG	CAGGAGTTAG	3000
CGGCGCTTGA	GCGGCGCTTT	GCACACGTGG	TGCCACCGGA	TCCATATAGT	TTTTTTGTAC	3060
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GGTGTATTTT	TCCTGTTCTG	TGCAGGCGTT	TTCAGGGGTG	CAGCGCCCgA	ATCGTTTTTT	3360
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CGAGGAAGAC	GCGCTGCAGG	CAGAGCAGGA	CCTGTACGCA	CAGGGCGCAC	CGGTGCCCTT	3540
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TGGATGTGTA	CACCTGACACG	CGTCGTGCGG	CAGAAAATCT	TTTTGATAAc	GATTATCAAG	13260
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ACAACGGTAT	CCAAGACGTA	CAGACTTTGG	TAGATTTGGG	CGAGGAAGGC	TTGCGTGCGC	13380
TTGAGGGCAT	GGACGAGGCG	CACGTACaAG	AATTGCTCGC	CgCCATTGAG	GAGAATTTTG	13440
AAGTTGTCTG	GGAnGGGGAG	GAGGCTTCAG	TTACATCTTC	TCCCGGGACT	GGTGGTGATG	13500
ArGATCAGGC	gTTGCAGTGT	CCTGAgTGTG	GGGTGCgCaT	TACTACTGAC	ATGAGTGAGT	13560

GTCCTCACTG	TGGTATTGGC	CTCAGCTTTG	AGTTTGAATA	CGAAGAGAAC	GwssmaTAGG	13620
AGAGCTATGA	CCTACGAGAC	AATACGCCTA	AAGACACTTC	CCGTGTTGCT	AGTGAGCaGG	13680
CTGTGCgTTC	aCCGGTGAAc	GTCTGGTCcA	AACTACCTCT	CGTACACGGG	CgGATGTTGA	13740
CGTAAAGGAG	AAAAGACTCg	TaATAAAGAA	GACAATCAAA	GTGCGCGCaA	AGAAAGTGGT	13800
TGCCAAAGTT	ACTgTGC GCG	GCGTGTGTCG	TGCGCGGATG	AAAATCGCAC	GCCGGGCGAC	13860
GCGAGTCAGG	CGACTATTTC	TGCCGCGCCC	GAAGATAAAA	AGCAAGGTTT	CCCTGACATT	13920
CGGGAGGATG	GCGTTGCGCG	TGGTGTATCT	GCCTCGTGTG	GCGCTGTGCA	GAACGCTGCG	13980
TCGTCACAGG	TTCCCGGTGC	CCGTACTCCG	GGGGTTATAG	GCGTTCCTGT	TGCCAGCAAA	14040
ACGGTGGAGG	AAGCAAGGGG	TGGGGGAGCT	AAGCGGGTAA	TACTAAGCG	TGTGGGTGGG	14100
GTTTTCGTGC	TTGATGACTC	TGCGGCACCC	CTAACCGAAA	GGCAGGAAAC	CTTGCACTCTG	14160
GCGCGCGCCT	TTCTCGGTTC	AGCCGCACTG	ATCGTCAGCG	CACATyGGGT	TTTCTGGTAC	14220
TCAAGCGCGT	GCTAACgCAG	GTGGTGTGCG	GCGTGGAGAG	GGCCGTCCGT	TTGCTCGCGA	14280
TTTCAGTCGT	GGGTCCACGG	GTGGGTATCG	GCCCGCAGTG	AGAGGTCCGG	CTCGGCCGGC	14340
TGGACGTGTT	GGTTCGGGTC	CAAGAGGGCC	GGCGCCCCTG	CAAGTAGGTG	CTGGTAAGCC	14400
TGCCCAGAAC	AAAAGGTCTT	TCCGGGGCAG	AAAGCAGCAG	ACATATCAGT	ATCAGCATAA	14460
GGATCGTCTT	GAAGTGAAG	AAAAGCTTCT	CCAGCAGAAG	AAGAAAAATA	AGGAAAAGCT	14520
TGCGGCGGTC	CCGCGCTCTG	TTGAGATCAT	GGAGTCCGTT	TCGGTTGCAG	ATCTCGCAAA	14580
GAAGATGAAT	TTAAAGCCT	CAGAGCTTAT	CGGTAAGCTT	TTTGGCATGG	GCATGATGGT	14640
TACCATGAAT	CAGTCTATCG	ATGCGGACAC	CGCCACGATT	CTTGCTTCTG	AGTACGGGTG	14700
TGAGGTAAGG	ATTGTCAGTC	TTTACGATGA	AACAATTATC	GAAAGTGTAAG	GTGACGAGCA	14760
TGCGGTGCTC	CGCGCACGTC	CGCCAGTAGT	GAAGTGTATG	GGACATGTTG	ATCACGGAAA	14820
AACTAAAACG	CTCGATGCCA	TCAGAAGTAC	GCGCGTTGCT	GAGGGGGAGT	TTGGCGGTAT	14880
CACGCAGCAT	ATTGGTGCTT	ATGCAGTCTC	TACTCCGAAA	GGCTCAATTA	CCTTTTTTGA	14940
CACGCCAGGT	CACGAAGCTT	TTACCATGAT	GCGCGCGCGT	GGAGCAGAAA	TTACCGATAT	15000
TGTGGTGCTC	ATCGTAGCTG	CAGACGATGG	GGTAATGCCC	CAGACGATCG	AAGCGATCAA	15060
TCACGCAAAG	GCTTCGAAGG	TTCCCATTTAT	TGTTGCAATC	AACAAGATTG	ACCGTGCGGA	15120
TGCGAACCCG	AATAAGGTCA	TGACGCGCCT	TGCTGAGCTT	GGCTTAGCTC	CAGAGGAGTG	15180
GGGTGGTGAT	ACCATGTACG	TGAGTATTTT	TGCGCTGCAA	GGTATTGGGT	TAGATCTGTT	15240
GCTAGATGCC	ATCATGCTGC	AGGCGGAGGT	GATGGAGCTT	CGTGCAAATT	ACGGGTGTTG	15300

TGCAGAAGGG	CGCATTATAG	AGTCTAGGAT	TGATCACGGG	CGGGGGATTG	TCGCGAGCGT	15360
TATCGTGCGT	CGTGGGGTGC	TTCGTGTTGG	TGACACGTAC	GTTGCaGGTG	TGTACTCAGG	15420
GCGTGTGCGG	GCAATTTTTA	ATGATCAAGG	GGAGAAGATT	CAGGAGGCGA	CTCCTAGTAT	15480
GCCCCGTTGAA	ATTTTAGGGC	TTGAGGGAAT	GCCCAATGCG	GGTGATCCTT	TTCAGGTTAC	15540
GGATTCTGAG	CGTATTGCAC	GGCAAATTTT	GCTTAAGCGT	CAGGAGTTGA	GGCGTTACGA	15600
AAATGCGCGC	AACGTGAAAA	GGATAACGCT	TGACAAGCTG	TACGAGTCTA	TCGAGAAGGG	15660
TTCGGTTTTG	GAGTTCAAGG	TTATTATTAA	GGGGGACGTG	CAAGGATCGG	TTGAAGCGCT	15720
CAAGCAATCG	CTTGAAAAAC	TTTCTACCGA	TGAGGTGCAG	TTGCGTGTCA	TTCATTCGTC	15780
GGTTGGTGCG	ATAAATGATT	CTGATGTTAT	GCTCGCAGCT	GCTGATTCAA	ATGTGACCAT	15840
TGTTGGTTTT	AATGTACGTC	CCACTCCCCA	GGCTGCGGTT	CTTGCAGAAA	GGGAAAGAGT	15900
AGAAATCAAA	AAGTATACTG	TCATCTACCA	GGCGGTGGAG	GAGATGGAGC	GAGCTATGGA	15960
GGGTATGCTC	AAACCATCCC	TCAAAGAGGT	AGTGCTCGGT	TCGGCGGAGG	TGCGCAAGGT	16020
GTTCAAGATT	CCCAAAGTGG	GAAGCGTTGC	AGGAGTATAT	GTGCTTGAAG	GGTAATGAA	16080
GAGGAACGCC	ATTGTTACAG	TTGTGCGCGA	TGGGATTGTC	CTGCATTCGG	GGAAGGTTTC	16140
CTCATTGCGG	AGAGAAAAGG	ATGATGTGAA	AGAGGTACAC	AGCGGCTTTG	AGTGTGGGGT	16200
TGGAGTTGAA	AATTATTTTG	ATTTTAGGGA	GCGTGATCGG	CTTGAATGCG	CGGAGATGAA	16260
GGAGGTGTCG	AGGAAACTGA	AGGATGCCGC	TCTTTCCGAT	GCGGCGCGCT	TACAGGGATG	16320
AAAcAGGTAA	GTCAGTTAAG	GGTGCGCAAA	TTGGGGGAGC	ATATCCGCGC	AGAAATAGCG	16380
CAGCTTATTA	TGCTCGGCAA	AATAAAGGAT	CCACGTGTTT	CTCCCTTTCT	CTCTGTGAAT	16440
TGGGTGGATG	TGTCTGGGGG	GATGGTCTGT	GCGCGGTAT	ATGTGTCGAG	TTTTATGGGT	16500
AAGTACAAAA	CGAAGCAGGG	AGTGCAAGGC	TTAGAAAGCG	CGGCAGGTTT	TATTCGCTCT	16560
GTCTTGGCTA	AGAAACTCCG	TCTGCGGCAG	TGTCCGCGTC	TTAGCTTTGT	GTATGACGAG	16620
AGTGTGAGGG	ATGGATTTTC	TCTTTCGAGA	AAAATAGATC	GGTTAGAATC	CGGCGGTGTG	16680
CAGACTGAGC	ATGCCtGACG	CTATTGTTCC	TTTCGCAAAG	GTTTCCGGTC	TTACGAGTTT	16740
TGCGGCACTG	GCACAGGTCA	GGCGTCTTCT	GGGAGTAAAA	AAGGTAGGGC	ATACGGGGAC	16800
GCTTGATCGC	TTTGCTGATG	GGCTGCTGTT	GCTTTTG GTA	GGGGGCTTTA	CCAAACTCGC	16860
GCCGGTGATG	ACTCGCTTGG	AAAAGAGTTA	CGAGGCTCGT	ATCCAGTTTG	GGGTACAAAC	16920
AGACACTCTA	GATCCGGAGG	GGGCTGTCGT	GCGGTGCTCC	TTGTTCCCAA	CATTTGCGCG	16980
CGTGCGTGCG	GCGCTGCCTC	ACTTCACTGG	GAGTATTGAT	CAGGTGCCGC	CTGAATATTC	17040

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GGCGCTAAAA TTCGGAGGTG TCGTGCCTC CGACCGGGTG CGGCGTGGGG AAGCAGTGTG 17100
 CATGAAGGCT CGGCGTGTGT TCGTCTTTGA CTGTCAGGTA CTAGGTTGCG AGGCGGATCT 17160
 GGGTGAATTC AAAAAGACGC AGGCGGGGAG GGGGGCTGCG ATTGCTGATC TTGATCTGAC 17220
 GCGCGTGCCT GCTGTAACGC TGTACGTACG TTGTTCCGCA GGCTTCTACG TCGCTGCACT 17280
 TCGCGCGGAC ATAGCAGCCG CTTGCGGCTC TTGCGCGTAT nTTCACATTT ACGGAGAACA 17340
 CGCATTGGAC CCTTTGATCT TGCACAGGCG GCGGGTGT 17378

(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5641 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

GAGGAAGGCA AAACCTTTaA TTAAAGTACA CTGCGCGTAT GAGCAAAAAA TGCGCGCCTG 60
 TTTGAATATT ATTCTGCACA CAGTACCGAA GTGTtctCTGT TGGGTATGCC AGAGACACGT 120
 AACAAACAGT TGAATGAGAA GCTTGTGTAC ATCGAGCAGC TACAAArGaA AGTAGTGGCG 180
 CAATACGATC CGCAGCGGGT GCGCTATTAC TCCCTCAAAC CAATTGTACC CGGTGTACAC 240
 GGAACATATG CAAGCGCGAT AAGGGACACG CACGGCCGTT GGGTACACGT GATGCACAAA 300
 GACGGCATCC ACTACACCAT AGAGGGTGGT GCGTACGTTA TGGAAACTCT CTTACCCCTT 360
 ATTCTTGCAAG ATTTGGAACG GTCTCGTCAC GGATACATGC GTTCTTCTCT GGGGTGCGAT 420
 GAACTCCCTG CGACGAAGGG aTGGAAGAG CACGTCACGC GTCAACTCGA ACATAGGGAT 480
 AAACCGCACC GTTGTATCCT GCATGACAGG GGGTGCCTCC TGCArGGGGT TATCGTACGT 540
 CCACACCGTT GCCTGCACTT GCATAGTGCT GTTTGGTCA CCTGAGAATG TTACCGTAAA 600
 GGGGAGTGGT GGGCGCGCCT GCGATATGAA CCGTACCACA GATCCCTGCT CCAAACGCGT 660
 AAAAGGCCTA TCTGCTTCGT ACGCAGCAGT TCCGTGTGGA GAGGTGATGC GCAGTTCGAT 720
 TGCCTGCGCG CGCAACTGAG AGCGCACCTC CAGGACGTG ATGCGTCCGC CAAAGTAACT 780
 GcGAGAgTCC ATGGAGATCT GGAGGTGATC CTGTGCCTTT TGTATTTCCG CCGTGGACAG 840
 CCGCGCGTGT GTGCGTGAC GTATATGCCG AGGAATGGGC AGTGGAGAGT GAAGCGAAAG 900
 GGTGAGCCCC CTCTCACTAA TGCGATAgCA TGCGGTAATT TCCTGTGGGA TACGCGTGCT 960
 TGACAGTGAA amGCTCCAGA GCACACCGTT GATAACGAGC ACAGTCAGTA ATGCACCAGA 1020

AAGCAGAAGG	TTTCTCCTAC	GTATGAAGGG	GATGCGAGGG	TGGGATTTTt	CCCGTTCAAA	1080
AAAGAGAGTG	AGCATAAAAA	GCATAAACGG	AACACAACCG	AGTGCAAAAA	ATACGTTGCT	1140
TTGGTGGAAG	GATAACGGCG	CGGTAACCGC	ACTGTTCTTT	AAGTATGCGT	AAAGGAAGGG	1200
AGCGAAGAGA	AGAAACATCA	TTGCAAGCAT	TATCCGTCGT	GTAATCTTTC	TCTGTGCGCT	1260
AAAGAAGACA	AGCGAGAGCG	CATACTCTAG	AGCGAAGACT	GCTGAGAGTG	AAAAATCGAT	1320
AACAGAAAAA	AGGACCGCGT	ACAACAGACA	GAGTGTGCTT	GCAAGATATC	CTCCGATAAA	1380
TCCGTTGTGC	AACATGGAAT	CTCTGATTGT	CTTGCTGTTT	GCCATGCACA	CGCACGAGAG	1440
TGCAATTGCG	ATGCTGTGCT	TTACTATGAG	TGCAAGAAGC	GGTAATGCAC	CTGTTGATGT	1500
GTGCGTGCCA	AAGCGGATAA	GAAAAAAAG	AGCGGTAAGt	TGTGTTGCAA	CGAACACGCT	1560
ACACACGCTC	AGTACCCCTA	AGATAGCAGG	GAGCCACCAC	ATGGCTAAAA	TAGTGTTCCTA	1620
GTAATGCCTT	TTGCGCGAGT	CAGAAAGAAA	ACTAAAAATA	GCCAAAGAGA	GCAAAGAGT	1680
GATGACAGCG	CCTAAGATAA	GAATCACGAA	AAATTGCTCT	CGAATGAGGT	AGAGCGTGCC	1740
GCCGTACGAA	ACACTCACGT	AATGCGTGTC	CCATTCTTCT	GAGTACACCT	GGGTAAGGAG	1800
TGCCgGGAGC	GTGTGCAGTG	CACCTGGAGG	GTACAACGAA	TTTTCCATCC	TTACCGCaGg	1860
AATATGCTCC	TTGATGTAGA	GTGCATGGCG	TGGGTCTCG	TGCAACCATC	CAAGCCGGTG	1920
CAATATGGCG	TCAAAGTCCC	GATAACGGAT	GGGACGTGG	TGTGATGTTA	GGTGTGTA	1980
TACTGCTTGA	AGAAGCCAGG	GTGGGCACAC	TGTACGGTGT	GGGGCGTGT	GCAAGCGCGG	2040
TGGTCTGTGA	GTTTCGTGCA	GTATCAGGAC	TATTGGCGCC	TTATAGGAGG	AGATGAGCGA	2100
GATGAGTTTT	TTAGTTCCTG	TAAGCCGATC	GACGGGCACA	AAATCAGGAA	CGGGAGGATG	2160
GTCTGTGCA	GTTATTGCCA	CGAGTACCGA	CACGTCTGGG	GTCTGGTGCT	CAAAGTCTTG	2220
CACCAGCAAG	CGGAGCTGCT	GTACCGCACG	CGTCTCGCGT	TCTTGCGCTT	CACGCGATGC	2280
AGTGAAGACG	ACGAGCACAT	CCGTTCTTGG	TCCAAAGAAG	TGAAGCTCGT	TTTCCTGTGC	2340
GTGTACAAAA	ATACCACAGA	GCACGAAAAG	CAGCGCGCGG	CACACCCGAG	TCATGACTTG	2400
TTATCGGTAG	GGAGTGCGCC	GGTTTCGAAC	CATGTCTCTA	TGCGCTTGTA	GGAGCTATTA	2460
ATCcTGCGCA	CTATATCGGC	TGCCTGTTTCG	GACGTGTGCG	TACACGTGAA	GACGTCAGGA	2520
TGGTATTTTT	TCacAGTCGT	TTCCACGACT	GCTTGcAGTA	GGAGAGGGGG	AGCCCTGCAG	2580
GTAATGAAAG	GACTGCAAAA	TCCTCAACGA	GTTCAGGAGG	AACAGGGACG	CGCACTGGTC	2640
CTGGGGGAGG	GTTCTTTTTT	GGCGGCGGTC	GGCGCTCCAT	GCGTCTTGCA	CAGGTGCGGT	2700
ACTTGCCGCC	GCGGTTGTCC	CATTGATCGA	AGGGGTCTTC	GTCGGAGTTG	AGCCGGTTCG	2760

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GTAGGATAGC ACCGATTTCGC TCGTAAAAGC TGGTCATAGA CATGTTCTCTT TTTGAATAAT	2820
GTCGCCGAAG CGTGCGCCTT CTCTGCGTGT ACGGAGCGTT GGAGTACTGC CCCCACAAAC	2880
AGGTTGGCGT GTTCGGGAGC TTCCCCGGCA GAAAGATTTG CCcKCTGCGC ACTATTACCA	2940
GGTTCTCTTT TTGGAGCACA GTCCACGGG GGTATGCGTG GAGATAGTGA AGAGAGCGGT	3000
TAGATTCTTG GTAGTGAGCG CGTTCTGAGG GAGCAAGCAC CTTCTCTCCT GAACCGATGA	3060
CGGCGCGAAC AACGTGCGGG GCATACCCAC GCTCGTGTAG AAAGGAGATA ATCTGTGAGG	3120
GAGAACGGCG AGCGCATGAG TTGAGCsCCG CTGTCACTGGT GCGAAAGTCG GCAGGATCTA	3180
ATGCAATGGA GTCATCGAGT CCTGCATCTG TTCGCGAGAG GCAAATGTGT TTTTCGACGA	3240
TGCAGGCGCC GTGTGCACGG GCAAGGAgCG GGACAAGGAG CGGGTCTACG CTGTGGTTCG	3300
TGACGCCGAC GTTGATATTG AAGATGGTAG CAAGCGCAGG CAGCAGCGCA AGGTTGTACT	3360
CTGTCTCTGG AGCAGGGTAT GCGGTGATGC AGTGCAGTAA GGCCTGGGAG CTGCCCTGCT	3420
TGGTATACTG GCGGCATTGG GCAAGGGCCC CTTCGATTTC CTTCAGGAGG CAGACTCCAC	3480
TTGAAAGTAT AAGTGGAAGT TCTGCAGCAG CGAGTGTGGA GATAAGGGTG GGGTAGTTGA	3540
GCTCTGGGGA AGCTACCTTG AGGAAGTCTG GTTTCaAGGC GAGCGCTCT GTTCAGAGC	3600
GCGGGCCAAA GGGGCTGATG CCGACTAGCA TACCCCTGCT TCGTGCCTGG TTAAAGCACT	3660
GCGCATAAAA GGAAAGTGGA ACTTCTAACT CCTCAAAGCG CTGGTAGAGG GAAACTGCTC	3720
CGCTGGGAAG ACGGACAGCC CCCGTCAGCG GGTGCAGTAT TTCGTGCGCG TAGATGAGCT	3780
GGAATTTGAC CsCAGCTGCT GCTGcgTCTG CAGCTGCGTC TATGAGCGCC CGCGCGGGt	3840
cAAACGAGCC CGCGTGTGCG aGCCGATTTC AGCGATGGTG AGTATATCCG CGTCTGGGCG	3900
AAAACAACGT CCCCCGCACG TGAACATGGG GCATTGTACG CCAAACGCGT GATTGGTGTA	3960
TAGCTTTCTT GATCGGTAGG CAATCCTTGC CGTGGTTTGT ATGGGTAAGA GGCAGGTGCT	4020
AAGATAGTGT GCGCTTGTCa GACATCTATT TTTGCAGTAC CGTCGTGTCG GCCCTGCGGG	4080
TGCCGAGGAT GAACGGCATG TTGCGCACGA GCGTGTGGT ATGTATTGGG TGTCTCTCTG	4140
CTGCAATCCC TGCGCGCTTA nGTGCCCCGTG CGGTGCCGCC TCTCTCTAGT GCGGTGGTAG	4200
ATGAGGCGGC ACTCCTTTcT GTGCArGAGG CGCGTGGTAT TCGCGCCCTT CTAgAgGGcT	4260
TGCGCGCCCT TCTGGArATG GCTCTTCCAG ATCGCATCCT TCTCCTGCGC CTGAAGCTCA	4320
TGCGCGTACG CTCCATGACG GTACGCCGTT GCAGATAGCG GTTTTGATTG TTGATTGCT	4380
CCAGGGGGAT AGTCTTGAGG ATTTTTCATT GCGTGTGGCT CAGGAGTGGG GTATCGGCAG	4440
TCGTGCGCAG GATACAGGAA TTGTGTTAGT GATTGCGCGC GCGGAnTAnA AGCACGCATC	4500

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GAAGTAGGAT ACGGTCTTGA AGACCGCGTC ACCGACGTGC ATGCACATCA GCTTATCCGT 4560
GGGACgCTCG CGCCGTGTTT TCAAGCTGGC GCCTATGCAC AGGGTGTGTA CGAAACGGTG 4620
TTGCGTTTGG CTACCCTGGT GCGGGGTCAA CACGAGGTAC AGCAGTTCAT GCAGCCGCGC 4680
TCTGTGCAAC cTGCGGTACC GCGCCGGGGT CCAGTGAGAA ATAGTGCCGG GAGCGTGTTT 4740
TTCTTCCTGC TGCTTTTITA CTGTCTGGGG GGCCGGCTTT TGCCAGGGGG AGTGTGTGG 4800
CCATTGCTGT TCTTCGGCAC TCGGCGGCGT TATGACCCGT TCGGGTCAGG GTTTAGCGGC 4860
GCATTGCGGG AGTGGGCAGG GGATGGAGGA GGGTTTTCTG GCGGTGGTGG TCGCTTCGGT 4920
GGAGGCGGGG CCTCTGGTTC TTGGTAGCTG CTCCTAGCAC AGCACGGTTT CTTTTCTGT 4980
ACGGGCAGTC TCTCTGGAA GAGGTGTATC TATAGTGTGC TCGGTGACGC ACGGGAAAAG 5040
CATAAGGAGT GAGAACAATG ACTGAAGAAG CTATGCGCGC GATGGCACTT TCCATCCGCA 5100
GTTTGACGAT AGACGCCATC GAACGGGCGA ATTCTGGTCA CCCTGGTTTG CCGCTGGGCG 5160
CAgCAGAGCT TGCTGCCTGT TTATATGGGA CGATCTTAAA GCATAATCCG GCGAATCCTA 5220
GCTGGTTTAA TCGGGATCGT TTCGTCTGT CTGCAGGACA CGGGTCTATG CTCTTGTAaT 5280
GcTGCGCTCC ACCTTTCTGG GTACGACGTT TCGCTTGAGG ATATTAAGAA CTTTAGGCAG 5340
GTAGGCTCCC GGTGTCTGG CCATCCTGAA TACGGTTGTA mCCCCGGTGT GGAAGCAACA 5400
ACCGGTCCAT TGGGTCAGGG TAcTCTATGG CGGTGGGTTT tGCGCTTGCA GAGGCAATGC 5460
TTGCGGCAmG TTTTAATACT GATGAgCatG CCGTTGTAGA TCACCACACC TATGCGCTTG 5520
TGGGGGAAGG CTGCCTTATG GAGGGCGTTG CCTCAGAGGC TTCTAGCTTT GCCGGCACTA 5580
TGCGTCTGGG CAAGCTCATC GTTTTTTATG ATGAGAACCA CATCAGCATA GACGGATCTA 5640
C 5641

(2) INFORMATION FOR SEQ ID NO: 13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8790 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

GGCAACAGAA AGCGGCGTAT GTCCGTCAGC GTCGCGTTCC TGGGTCGGGG GACCGAGCGT 60
GACAAGGTGT TTGATCAGAT CGCGGTCCAG CGCACGCACG GCCCAATGCC AGGGTGTTTT 120
GCCGCTTTTG TCCTTTTGTA GAAGTGCTT TCTGGTTACC AATTCGTGCG CAGTTCCcTT 180

ACGGATGGCG	CGGGTAAGCG	GAGTGTCTCC	CTGTGCATCC	CGCGAAAAGA	GGCTCGCGTC	240
TCGTGCAATC	AGCATACGAA	CAGACTCAAA	ACAATTTTCT	GTGACCGCCA	CCATAAGCGG	300
CGTACTGCCT	GAAGCATCCT	GGGCCTCAGT	ATCGGCACCC	ATAGAGAGGA	GGAAGTCAAC	360
CACGTGCGCG	TCGTTACGCA	ACACCCCCAC	GTGCAAAAGT	GTATCTCCAT	TTGCATCACG	420
GACGTTGACA	GAATCTTTAC	CAAAACGGGT	CTTCAGCGTA	TCTAGATCAC	CGCGCGCAAC	480
CATTTCAAAG	AGATCGACCG	AAGCCTGAGG	AGAGGGAGAA	GACGTAnTAG	TGCAGGAAAG	540
CAAGACGAGG	AAACACGCAA	ATGTGCTCCC	CACAAACCAC	ACAATGCCAC	GATTATGTAT	600
ATGCATGCAG	CGGATCCTCC	TGAGTATGGT	GCCGCGTCTG	TACAGTGTGT	GTAAAAGCGT	660
ATCCTACCGG	TTTCGGCGAT	AAGGCACAGA	ATCTTTAGAC	GCCCACTCTC	CCGTGAGGAC	720
GCAACcGCGC	AGGCGCGTTC	CCATTTTTAA	AAACCCAGTA	TCTGCTGACG	GTGATGTAAT	780
CCGAGGTCTT	TTAATGTGTC	ACACACCTGC	TGCTGAGGTG	AcCGTGACG	TGCCTTTGCA	840
AAATCACGCG	CAAAACAATT	CATTGAAAAA	TGTTGAAATA	CAAAAAGCGG	CGTACGGCGG	900
TCACACACCG	TTTGTAGTAA	ACGCGCATAG	GGTTCAAACA	GATGTCCGCT	TTTCAATTCG	960
CTGTAACCCA	CAATCCACAG	ATCACATCCT	AACGATCGCT	GCAGCTGACA	CGTACGCCGC	1020
GCCATCCAAC	ACTGGCTACG	ATGCAAAAAT	GACTGCACCT	GCCGTGCACG	CgCAGTTCTT	1080
GCTGGATCTT	GCGCAAGGaG	GCGTACCAGT	GCACGGAGCT	GAACCGTTTT	TGCCGTGTGA	1140
AGCGGCGTTT	TGTTCAACAG	CATCACGTCT	GTACGAAAAT	CAACCCCTAA	CTGTGcATGC	1200
CGCGAAAAAA	AGCCCTGaGC	CACTCGACCT	GACTGTCTTA	CCAGATACCG	TTGCTGCGTA	1260
TGCaCTGGCT	CCTCTTTCCC	TGGATTGTCC	GAAACCAAAA	TAAGGGCCGG	TACAGGATCA	1320
CTTTGGGTCA	GTCTCTCAAG	CGCGTGAGGG	TACACAATCG	GAGTGTGTAC	CGGATACGTG	1380
GGTATTCCTT	GTGCACGCAC	GAGTGCCGCT	TGCGCACGGT	GCAAAAAGC	CTGCGGCGTG	1440
CAACACGCa	CTGCAGACTG	CGCTGCATGC	GGGTCCATAT	ACGGATACCC	AAACGCGCGC	1500
AAACTCTGTA	CACAAAAAGC	CTTGAGGTCA	GTGCGAAAAG	CGGcGAGCGC	ATGCCACTGC	1560
GACCGAGTcA	CGCGCTcACA	TcCAAAACAG	AAAGCATCCT	CTACTATACC	CTACATACCA	1620
CGTCCCTTCC	TACAGACTGc	AGTGACGGCG	CAGGCGCACT	GGCTCAGTGC	TTCTTCCAAA	1680
ACGGCGCCCA	TTGACAAACC	ACCCATAAGG	TCTCACGATT	GGGCCTCTGT	GTAGAAGAGA	1740
ATATCACCAT	GCTGCAAAAA	CGCTCAGATA	CCCTCGACCG	TCTGCGTCAC	AGTCTGGCGC	1800
ACGTTATGGC	AGAGGCCGTT	CAAGCTCTCT	TCCCCGGCAC	CAAGCTCGCG	GTGGGCGCGC	1860
CTATCGATTA	CGGGTTTTAC	TATGACTTCT	CACCTCCCCG	TCCCCTGTGC	GATGCAGACC	1920

TAGCCCCCAT	TGAAGAGAAA	ATGCGCGCCA	TCTTGCGTGC	GGGGTGTC	TTTGTC	1980
AGGTGGTTTC	GCGTCTGAC	GCGCTTGCTC	GTTTTAAAGA	CGAGCCATTC	AAGCAAGAGC	2040
TCATCGAACG	CATCAGCGCA	GACGACACGC	TCAGTCTCTA	CCACTCCGGC	GCGTTC	2100
ACCTGTGCCG	GGGTCTCAC	GTGCAGTCTA	TGCGAGACAT	TAATCCGCAC	GCCTTTAAAC	2160
TCACGAGCAT	CGCTGGGGCC	TATTGGCGCG	GTAATGAGCG	CGGCCCCCAG	CTGACGCGCA	2220
TCTACGGCAC	TGCTGGGAA	TCTGAAGAAG	ATTTGCACAC	ATACCTTCGC	ATGCAGGATG	2280
AAGCAAAACG	CCGAGATCAC	CGTAAGCTCG	GTCCTGCACT	CGGTCTCTTT	CACTTGGACG	2340
AAGAAAATCC	TGGCCAGGTC	TTTTGGCACC	CTGAGGGGTG	GACCCTCTAC	GTGGCCATCC	2400
AGCAGTACTT	GCGCCGCGTC	ATGCACGAAG	ACGGGTACGC	AGAGGTGCAT	ACTCCCTTTG	2460
TCATGCCCCA	AAGCCTTTGG	GAACGCTCGG	GGCACTGGGA	CAAATACCGC	GCCAACATGT	2520
ACCTGACCGA	AGcGAGAAGC	GTTCTTTTGC	GCTCAAGCCC	ATGAATTGTC	CCGACATGT	2580
CGAAATCTTC	AAGCAAAAAA	CACGCAcTAC	CGTGATCTCC	CGCTCCGTCT	TTCGGAGTTT	2640
GGCTCGTGCA	CCCGCAATGA	ACCGTCAGGC	TCCCTGCATG	GAGTTATGCG	CGTACGTGGC	2700
TTTGTAACAAG	ACGATGCCCA	TATCTTTTGT	ACTGAGGCGC	AAATCGCATC	GGAGGTCACC	2760
CGTTTCTGTC	GCCTCCTTGC	GCGGGTATAT	GCTGACTTTG	GCTTTGCACA	GGAGCAGATC	2820
CGCGTCAAGT	TTTCTACGCG	CCCAGAGCAG	CGCATCGGAG	ACGACGCCAC	CTGGGACCGG	2880
GCCGAACGCG	CATTTGGCAGA	AGCATGTGAA	GCAGCAGGCC	TTTCGTACGA	GCACGCACCG	2940
GGAGAAGGAG	CGTCTATGG	ACCAAAGTTG	GAGTTTGCAC	TTATAGATAC	ACTCGAACGC	3000
GAGTGGCAGT	GCGGCACCAT	TCAGGTAGAC	TATCAGTTGC	CCTCGTGCGA	GCGCTTGAAC	3060
GCAGAGTATG	TGGGGGAGGA	CAACCAACGG	CACATGCCAG	TGATACTCCA	CCGCACGGTG	3120
ATTGGGTCTC	TAGAACGGTT	CATCGGTATT	CTCATTGAAC	ACTACGGGGG	TGCATTCCCC	3180
CCATGGCTCG	CACCGGTGCA	GGCAGTGGTG	ATTCCGGTTG	CCCCTGCCTT	CCTCGAATAT	3240
GCGCAgcACG	TTGCACGGGA	GCTGTGCGCC	CGTTCGCTCC	GCGTGACGGC	AGACGTGAGC	3300
GCAGAGCGCA	TGAACGCAAA	GATCCGCACT	GCCCCAACGC	AGAAAGTGCC	CTATCTGCTC	3360
ATAGTTGGCG	AGCGGGAGTG	CGCGCGCacA	GGTAGCGGTG	CGTCCGCGCA	CAGGGCCCCA	3420
GCACTCAATG	GGGTCTCAG	CCTTTTCCAC	CTTTTGTGCTC	GCGAAcTAGA	GACGCGCGCG	3480
CTGCACGCCT	AGCCCATGAG	TCCCCTGTGC	CTTTTCCCCA	AACCTTCAGG	GGAAGGGACG	3540
CTATATCCGT	AGCTGCTGTA	CGCTACCGCC	GTAGAGtGCG	CGCGCGTGCC	GTTGATATCC	3600
TCACTCTTTA	CATAAGAAcTC	AAAGTCCATC	ATACGATCGA	TAATCCCGCG	CGGCGTAATT	3660

TCCACAATGC GGTTCGCAAC AGAGCTGACA AACTCATGGT CATGCGAATT AAATAAAATC 3720
ACGCCGGGAA ACTGCACCAA CGCCTCATTG AGACTTGCAA TTGCTTCTAG GTCCAAATGA 3780
TTGGTCGGCT CGTCCAATAT CAAAACATTG CTCCCAGAAA GCATTAATTT ACTAAGCATG 3840
CAGCGTACTT TTTCCCTCC AGAAAGTACA CGCACAGATT TGAGCGAATC CTCGCCTGTA 3900
AAAAGCATCC TGCCTAAAAA ACCGCGTACG TAGGTTTCAT CTTGATCATC AGAGAATTGG 3960
CGCAACCAAT CCGTGATAGA AAGATCACAA TCAAATACC GCGCCGTATC CTTTCCATA 4020
TACCCAACAG ATACCGTCTG TCCCCAACGG AAAGAGCCgG CATGTGCCTG CTTTTCTCCA 4080
GCAAGAATAT CAAACAATAT GGTCTTCGCG CGGTGTTCTT TEGACGAA AGCGATTTTG 4140
TCTGTGCGCC CAACTGTAAA GCTCATGTCT GTAAAAAGCT CACATGAACC TCCCTGCATT 4200
CGGTCTCAG CGGCATAGCG CAGTCCATCG CACGACAATA CGTGATTCCC AATTTACGCG 4260
CGTGGTTTAA AATGCACATA GGGAACTTT CGACCAGTCA CCTCAATCTC TTCCAGCACC 4320
AATTTGTCAT ATATCTTTTT ACGACTCGtC gccTGCCGGC TTTTGGCTGC GTTAGAAGCG 4380
AAgCGCAAAA TAAACTCCCT CAGGTCCTTC ATCTTTTCTT CACGCTTCTT CTGCTGATCC 4440
TTAACCTGCC GCTGCATAAT CTGACTCATC TGATACCAA AATCGTAATT GCCCGAGTAC 4500
AAACGAATCT TCCCATAATC GATATCGCAA ATATGCGTAC ACACGCTATT TAAAAAATGC 4560
CTATCATGCG AAACACAAT CACAGTGTTG GGAATTCAA TGAGAAATTC TTCCAACCAC 4620
GCAATAGAGT ACAAATCCAA ACCGTTTGTC GGCTCATCGA GCAAAAGCAC ATCGGGATTA 4680
CCAAACAACG CCTGCGCTAG GAGTACACGT ACCTTCTGGC TTTCGTCCA TTGCGACATC 4740
ATCCGATCAT GGTGTGCCTC ATCTACACCC AACCCAGAAA GCATTTGTTC AATGCAATTT 4800
TCTGCCTCCC AGCCATTCAA ATCCGAAAAC TCACCTTCCA ATTCTGAAGC CTCAACCCA 4860
TCTGCTTAC TAAAATCACT CTTTGCCTAA AGAGCTTCCC GCTCCTTCAT CACTCGATAG 4920
AGCGCAGGAT GCCCCATGCA TACGGTATCT TTCACCGTGT GCTGATCGAA GGAAAAATGA 4980
TCTTGACGCA GAACTGCGAC GCGCGCGCCG GATGCGATag cGATACTTCC CTGATGATGT 5040
TCGAGTTTAC CGGAAAGGAC TTTTAAAAA GTTGACTTAC CTGCCCCGTT CGCTCCAATG 5100
ACTCCATAGC AATTCCTGC AACAACTTT AAATCAACAC CTTTAAAAAG AGGTTTGTCA 5160
GAAAAC TGCA CACTCATACC CGTCACTGTT ATCATGCGGC GCATGcTAGC GCAAAATCCG 5220
TGcACAGGac AAGCCGCTGT CCATAGAGCA TCACACATAC AGCGATGCTA TGAGCGCGTC 5280
ACTGTGAAAA ATATACGTGC AATACACCTC GTTCATTTCT TACACACAAC TGTGcAGAGC 5340
CCCCGTAGA AAGACAGGTC CCCAGTGTTC TCCTCACACG CTGATCATTT ATGTACACCG 5400

CACCGTGGCC AGAAAATACT GAAAGTGCAT AGTACGACTG CCTTCTCTGTA AAACGCGCAA	5460
CAACTGTGCC GGTGCGAGTA CCTATCTCAC TATTCCTTG CAACGTACCA TCAAAAGATA	5520
GTGTGCCACG GTCCGTGTAT AAATGCGCGT CAGATAGGAC GCAGCGACTG CATTGCGTAT	5580
CACCGTCTGT CGTGTGCAGG AGAGTCCGAT CGGTACGTAC TCCATTGAGC TTTAGTTGCG	5640
TCGCGTGC GC ATACACATCT GcAAAACGCA CCTCAATACC TTCAAGCCGA AGACTGCTGT	5700
CTTTCACCCG CACTTTAAGA TTGTGCACGT TGTGctgCGC TGgCACACAA ATGATCGCTT	5760
CAATCGGTAC CACGCTATGT CCCCATCGGC TCCCCATAC GTTTTTTCAA AATGTGTAAA	5820
ACCAATCGCG CAACGTATCG CGTACGTTCA ACGCACTCTG CATTACTCCT GGGGAATCCG	5880
CTGGAGGCGT GGACTCCCGT ACTGTTTCT TCCACGCCG TAGGACAaGC ATCGTAGGAT	5940
CCAGGTGAAT CGATAGCGGA TCGTACACGC TGTTCTTTAC AACCTTGAT GCAAGAGAGC	6000
GCCgnTGC GC ACATACCTGT ACACCTCACTC GTACGCGAta GCATCTATAA CAATGGTATG	6060
GGGATGTGCT TGATCTAGGC AGGTATATCC ATCTGCATCG GTAAAGGTAC GCACAACAGG	6120
TTGAGAACTG TCGCGGGGT GACGCTGCAT ACGGCTACTG GTCCAAAACC TCGATACATC	6180
TCCACGCAGA TACTTCATCG ATCCGCCCAA AAGATACGCA CACGCTAGAG AGAGCGCACC	6240
AACCAAACAA ACGATAACAG TGTGTGCACG CGCTTTTTTG TCCATTTTCT CCCCCTCACC	6300
TATTTCTCCT CTGTAGAGCC TTTCTCCGT CCTTAAACTG AACACCAGTT AGTGGACCAG	6360
ATTACGCCGC ATCAGTACAA TCGCGCGCAA TGAGTGGGA ATATCAATCT TTCACGCTCA	6420
AGCGTGC GC ACGcGTCTAT GACCAGTATA ATGTGATTAA CTCCCTTTG TTCGCACTCG	6480
TAACTGGCAA TACCATTACG CTCTATGCAC TGCTGCTTG TGCCCGCAGT ACCACGGTAG	6540
GCTTGCTAAG CGCGTGCATG CACTTTTCT TCTTTGCACT CCCTTTAGGA AACTTGTGT	6600
GCCGACGTTT TGGCGTCATT AAAACCTTTG CGTACACCTG GATCGCCGC AATACTAGTT	6660
TGCTTCCAAT GCTCGCAATC CCTCACCTTT ATGCACAAGA CTATACGGCA CTTGCACTGT	6720
ATGTGCTTAT TTTTCCGTC GCACTGTTTA ACTTTTTTCG TGGTATGGGA ATGATCGCGA	6780
ACAATCCGGT CATCACCATG CTCGCACCAG GCAAACATCG CAGCTCATAC ATCGTACGCA	6840
TCTCGCTTGC GAACAACAGT GCCATACTCA TTGCCACGCT TTTACTCTCC GGGGcACTGA	6900
GCGTTAACGC TTCCTCACA ACCTATCACT TTGCAACTGC ACTCGGCATC GCACTAGGTT	6960
TTTTTGCTTC GTTCTCCTT TTCACATTAC CTACCGTCGA GTCATGCGAA CATGTGCAGC	7020
AACTTCCCC GGAGACCCCA CGGACCTCAC CGCGCTCCGG GTACACCAG ATACTCCGTG	7080
CTCTGAAAGA GAAAACTTT CGCACCTTTA CGTTCGCTTT TTTTGTGAGC AGCTTTGCCA	7140

CAGGTACAGT	ACGCCCCCTTC	GTTGTCGTAT	TCGCAAAGGA	CGTATACCAC	ACTCCAGATA	7200
GCTTTATCAC	TATCCTCACC	GTATGTGCAT	CCGGCGGTGC	ACTCATCGTC	GGTTTTATAA	7260
TGAGTTTAGC	TATCGATCGC	ATTGGGGCAA	AGCCAATGTA	CATTATCTCC	TCAGTTTTAA	7320
GTGTACTCAC	CCTCATCCCT	GCGCTTGGTA	CGCCAGGACT	CCATTCTCT	TTCTTTTCAA	7380
TTGCTTTTTT	ATGCCTGTTC	TGTGCAACTA	CCAGCATGGG	ATTTACCGGA	CAAGATAATG	7440
CAGCGCAGTC	CTATTTTTTT	GTCCTCGTTC	CTGAGGATGC	TTTAATAGAT	GTAAGTGTC	7500
TGTACTATCT	TATTTTGGGC	ATCACTGGTG	GAGCCGGATC	GGTGATTGGC	GGCGTGGTAT	7560
TAGACTTCTG	CCATCTCTCA	GGATACTCCA	GTTTGCAGGC	ATATCGTATC	TTTTTTACAG	7620
GAGTCAGCGC	GATTATGATA	ATCGGCATCG	CGCTTCAGAC	ACAGcTGCGC	AACCTGGGTG	7680
GATACCGTGT	ATTGCGAACA	CTCGCAACGC	TTTGCTCTCC	AAAAGATCTG	CGTACTCTCA	7740
GCCTCCTACA	TAAACTCGAC	TTTAACGAAA	ATTTAGAAAC	CGAGCAGCAT	ATCGTACAAG	7800
AACTTAGTAC	CATCGCCTCT	CCCATCTCTG	CCGAACAAC	GGGCACCTAC	GTGCAATCGC	7860
CACGTTTCAG	TATCCGCGCA	AGCgcATTGC	AAGCACTGGA	AACGATTCCC	TCGCTGAGTA	7920
CACACAACCG	TAATCTTTTG	CTGCGAGAAT	TGCGCGAGGG	AACATTCACT	ACTGCCGCAC	7980
AGGCGGCACG	CATCCTTGGC	ATTCATATGG	TCCAGCAAGC	AATTCCAATC	CtGcgCGAAG	8040
CGTCCATAG	CGAGGATTAC	CTGCTCGTCG	GAGAAGCGCT	TGTaGcGTTA	GCACGCACAC	8100
ACGATGACGA	AAGTCATTTT	CTTATTGGGC	ATGTGcTGGC	GCGCACGCAA	AATCCCTTTG	8160
TCGTGCTGCG	TGGCCTGCAA	GCGCTTGAGA	TGCTCAATTC	AGTCCACGCG	CTACCACCAC	8220
TGTTTGAGAT	TTTGCGCACA	ACGTGCAAAA	ATACACAAAC	GCACACAGAA	GCATTACTGA	8280
CTCTATCGGT	CTTGATGGGA	ATACAAAATG	AATTCTACTT	TCTATTTGAG	CGCTACgTAC	8340
CGGTCATACA	ACCGTACAAG	CGCTAGTACG	AGAAAACTA	GAAGAAAGTT	TTGCTATCAG	8400
CAGGGTCACT	GACGCGACAC	TTGAGAAAAA	ACTGGAACGC	TTTACGGCCG	ACGCACGCGC	8460
GGGCACCCAC	GTGGTCATGT	GGGTACTGGC	ACGCGCAGGA	GAAGACCTAG	GGACAAAAAC	8520
AGCACTCCTG	CTGAGTCTTA	CGTTGGAGAA	TCCCCTGTGC	GCGCGAGAGG	CTTTTCGCCT	8580
TCTGATAGGT	ACATGGACGG	CCACCTTGTT	TAGAAAACCC	GCACTCATGT	GCTCTTAGCG	8640
CTCAGACGGC	CCGGTGCGCA	CAACACGCCG	CAGGACGTGA	TCGACCGTGA	CTATCCCCCC	8700
TAAAACCGAA	ATCGCACGGT	AGAAAGCGTT	TGCCCATCGC	GCAACACGTC	AAACCACACC	8760
TCCCTCgTnT	GACTGCAAGC	ACCGCGTAAA				8790

(2) INFORMATION FOR SEQ ID NO: 14:

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(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 651 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

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nCCAnTCGCG GAAATTAACC cTACTAAAG GgAACAAAAG CTGGAGCTCC ACCGCGGTGG      60
CGGCCGCTCT AGAACTAGTG GATCCCCCGG GCTGCAGGAA TTCGATATCA AGCTTATCGA      120
TACCGTCGAC CTCGAGGGGG GGCCCGGTAC CCAATTCGCC CTATAGTGAG TCGTATTACA      180
ATTCACTGGC CGTCGTTTTA CAACGTCGTG ACTGGGAAAA CCCTGGCGTT ACCCAACTTA      240
ATCGCCTTGC AGCACATCCC CCTTTCGCCA GCTGGCGTAA TAGCGAAGAG GCCCGCACCG      300
ATCGCCCTTC CCAACAGTTG CGCAnCTGAA TGGCGAATGG CAAATTGTAA GCGTTAATAT      360
TTTGTTAAAA TTCGCGTTAA ATTTTGTGTA AATCAGCTCA TTTTTTAACC AATAGGCCGA      420
AATCGGCAAA ATCCCTTATA AATCAAAAGA ATAGACCGAG ATAGGGTTGA GTGTTGTTCC      480
AGTTTGGAAC AAGAGTCCAC TATTAAAGAA CGTGGACTCC AACGTCAAAG GGCGAAAAAC      540
CGTCTATCAG GGCGATGGCC CACTACGTGA ACCATCACCC TAATCAAGTT TTTTGGGGTC      600
GAGGTGCCGT AAAGCACTAA ATCGGAACCC TAAAGGGAGC CCCCATTTA G                651

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(2) INFORMATION FOR SEQ ID NO: 15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5338 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

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TACCCTTTCT CCTTCAGTGC GTAtCTACAG yTATCGCACC AGACGCCACT TACAGCGTTG      60
GCGCGCCTTT TTGTCACGCA CGAAAcTGCg TATGTGCCTG CTATCCCCC CACGTCTGCC      120
GTGAGCCGCC CTTACACCGG TATCCTCATA GATGCGCGCG GTTCTCTTCC TGTGCACGGC      180
GAATACGTGT CAGAGCCGCT GAGCGCATGT TTGTTCCCA AGATTTGGAG CACGGACATG      240
GATTTAATCT ACGAAAAGAA TATGGTTCAC CCTGACCGTG CCAAGGCATG GGGTGTGGTG      300
CGGTACGGCT CGGTTTGGGA CGAGAAAATG TACCGAGACA GGATAGGTAC CACGCCCTTA      360
AAAATCATTG CGCGCGGAGT GTTTGGCCAG CAGCGCACGG ATCCTATCAT TGCATCAAAG      420

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GATGCAGCCC AGATCTTGGC GCGCCCTGAa GAACTTGCGT TTGCTTGCAG AAGGCAACGT	480
GATTATCCTG TGCACGAAG CAGCGCTGCG TGTGCACGTG CCGTATCCGC TTGTAGACGA	540
GCACTTTTAC TTTGCATACC ACGACGTAAA ACGCTTCCTA ACCGACGAGC GGTCCCCCGG	600
TGTCGGTGTT CGCTCTGGCA TCAATACCCT CAAGATCACC GTGTACGACG TGCCTTTTGT	660
GGCAAACCTC CCAGAGATTC TCGCCTCAGA AAAAGATCGG GTAGACGTGA TAGCAACCGC	720
ACTGAAAAAG ATGGGSCCGT ACACAAGkTT TTTAATTGAA GGCCACACCG CAGATTTACA	780
CCGCCCTCAG GAGGAAGCGG CGCTTTCTGT AGCACGTGCG CACGCATGGC GCAGGAACTG	840
TCCAGACGTG GCATTGAGAT GACGCGGATT ACTACGGCAG GACACGGTGC GACAAAGCCT	900
ATCGCGCCAA GCGATaCGCA CGCGAACAAA GCCAAAAATC GTCGAGTGGA GATCACCATC	960
TTGcCGGATT AGTGCACGTA CCACGGAGCA TTCTCCGTGC CGGCTATTTT TCCCAAGTAA	1020
AGAGAACCTG CGATGACGTA CCGATGGCTT TCTGCAGTCA GGCGCAGTTA AAAGGAAGGA	1080
GCACTATGAT AAAGCCACGC GCGTATGCAC TGTTAGGCGT GTTTTTCCTG TACGCCTGTG	1140
CAAGCACACC ACGGGAAGAA GATGTACCTG AAAAATTAC CCCCCTGAC CTCATGCTGC	1200
GTGCACAGGA ATCCTACGAC GCAGGTAATA TAACGTGGGC GCGTTTTTAC TACCAAACGG	1260
TTCTCGATCG TTTCCCGAAC AATGAGTCAG CCGTCATTAG TGCAGAGTTT GAACCTGCGC	1320
ACATCCTTGT TAAACAGAAA TCCTGGCAAG ATGCCTACAA TAGGCTCATG TATATACTCA	1380
AAAAATATGA GGCTGCAGGC AGCGCACGCC TGCCTCCTGC CTACTACAAG CTCACACTCA	1440
TTGATCTGTC GCGGGTAAAG CCGCACTTGA ATCTTGAGAC AGCGAATACA AAAGCAACAG	1500
AATATCAAAA GAACACCAA GAAGAGCTCA AGCAACGCCA GGAACACCG CAAAAACTCT	1560
TACAAGAACG CACACAAAA ATGCTTGAGG CTCTCCATCA AGAAGAACT CCCGAACAGG	1620
ACGCGCGCGA TACCGCAAAA AAGAAGACAG ACCAAGAAGA ACACACCATG CGCAAAGCAA	1680
ACGCGCCTAA AACCAGGCG TCTGGAGAAG CACCCACCCC ATGAAGATCC TGCACACAGC	1740
GGACCTACAT CTAGGCAAAA CACTCCATGA AGTATCGCTT TTTGCGTCAC AGAAAAAAT	1800
GCTCGGCGAT CTGTGCACCC TCCTTGCGCA GGACAACTAC GCCGCGCTCA TCATCGCAGG	1860
CGACATCTAT GACCGCTGTG TACCTCTGCG AGAGAGTGTC AGTCTTTTTA GTTCTTTTTT	1920
GCAAAATATC AAACGGTCCA TGCCACGGCT CCCGATATAT CTCATCCCCG GcAACCATGA	1980
TTCTGCGCAA CGTCTCTCCT TTGCCCAGGA GCTACTTAAG CAGCAGGGAG TATTCAATTGC	2040
GCAGGATCCT GAAGAGAGCA CCCGTCCCCA TCTCCTCTGT CACGAGGGGG AAACAGTGCA	2100
GTTATTTTTTA CTTCCCTTTC TCCACGCAGG TGCCTTTTCC TATCTTGaTG AGGAAAACAC	2160

CACTTGCTC	ATTCACACCC	AATCCGAAC	CCTTCAAGAA	GCCTCGCGTc	GCTTGcAGcG	2220
TGCAGTATCG	TTGGACACCC	CTTCTATCCT	TGTCGCACAC	CTATTTACCC	AAAAAGGTAT	2280
TAGCTGCGAA	AGTGAACGCC	CGTTTGTGG	CAATGCCGTT	TACGCTGACC	CACACTGGTT	2340
TGACTTTTTc	ACCTATGTTG	CACTTGGTCA	TTTACACAAA	TGTCAAAAAA	TCACCGAACG	2400
CATGTACTAT	TCCGGATCTC	CTTTGCCCTA	TTCGTTTGAC	GAAGCAAATA	CCCAAAAGGT	2460
TGCGCTTTCT	GTAGAGATTC	ACTGCAACAC	AAAGGGATTC	CCCATCCATG	TGACTCCCCT	2520
TCCACTTGAG	CCACTTATCC	CTCTTCGCAC	CATACGCGAC	TCATTCCACG	CACTATATAC	2580
CGGTGATCGC	TATCTCCTTT	ATCAACGTGA	TTTTTTAGAA	ATCACCCCTGA	CCGACCCGGC	2640
GCTCGTGAC	AATCCTATTG	GCCTTTTGAA	GCCGCGCTAT	CCAGGATTGC	TCAGTATCAA	2700
GCAGGAAAAT	GCGTTGCCT	TTGATATACC	CCCCCCTAC	TCCTCTAACG	AGGGGATAGC	2760
GCCCTGCACA	CACCACTCAT	TGCGCACACA	CTTTGATGTA	TTTATGCACG	AAGTAAGCCC	2820
CACTCCTGAT	GACAGAGAAA	AGGGCGCTCT	CTTTCAGGAA	CTTTTGTACG	AAATGCAACA	2880
GGAATTCTCA	TCGTGAAGCC	GATGCGTCTT	ACGCTCCACA	ACATCGGTCC	TTTCGTGGC	2940
ACCCATACAG	TTGACTTCAC	CGCGCTCGGT	CCTATTTTTc	TAGTGTGTGG	GAAAACAGGT	3000
TCAGGAAAAA	CCACTCTATT	CGATGCGATC	GCCTATGCCC	TGTATGGGAA	ACCCCTTGGA	3060
ACCCGTGCAG	AAGTTATCCG	CAGTCTGCGC	AGTCATTACG	CCGCACCATC	AGAAGCTGCA	3120
TTTGcTACGC	TGGAATTTTC	ACTCGGCACT	AAAATCTACC	GGGTACACCG	GACGCTGACT	3180
TGCACACTTT	CCCACAGAAA	AACAGAGCAA	CCCGAGCAGC	TGTATCTTGA	GCAAAAAAAA	3240
GGTCATGGAT	GGGAGCGTAT	TGCTTGTGCG	CATAAAAGTG	AAACTGAATG	TGTTATTAC	3300
GATCTTCTCA	AACTCAATAG	CAAAGAATTT	GAGCGCGTGG	TTATGCTCCC	ACAGGGAGAA	3360
TGTGCGCAAT	TTTTAAAgCA	AATTCAAAAG	AAAAAAAAGA	AACGCTGATG	AATCTATTTc	3420
CTGTTGATCA	ATATACTGCT	CTTATGGAGC	GAGCAAAAAA	AAAATCGCTC	CATGCCAAAG	3480
CAGTGCTTGA	AACGCTGCGT	TCGCAACTTG	AAACTCTATG	TGCGGAGTGC	ATGCCCAGCA	3540
CATACCACGA	AAGGAAACAA	ACGCTAGAAG	CTGAGTTACA	GCACGCACGT	GACGCACTGC	3600
AGCAAACCCG	CATCTCCCAT	GCGTACTATA	CACAAAAACG	TGAAGCGCTC	GAAGCACAGC	3660
TAAAAAACA	ACAACTTTGT	AAAGAGCTGC	GTGCGCGTAT	AGAAACATAC	CGCGCGCAAG	3720
AACCAGTCCA	CGCGGAAACT	CAAAaGCGTA	TTGATCGCGC	GCGAAAAGCG	GCACCACTTn	3780
TGCGCACATA	AAACACGTCA	CCCAGTGCGA	ACAAGATGCA	CaGCGCATTC	ATGCAGAAAT	3840
ACAGGAAAgA	TGCGTTCACG	CGAACAATTG	CTCATGAAAC	GAAGTGCGCA	TGTCGCGCAG	3900

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CAGTCATCCA TTGAAGAACA ACGCCGTCTA CTACAAACAC TTCATAGTGC GTGCATTAC	3960
ATTGAAGACG CGCATGACGT TGCCACGTCG ATACGCGACA TATCTTGTC GCGCACACA	4020
CTCACGCAGC ATATCCACAC GCTTGCACAA CAAAAACAA CACTTACCCA GCAAGAACA	4080
TCGTTGTGTA AAGAACTGGA TATACTGCAA AGAGAAGCGG GTACTATCGA TACTCGTACA	4140
TCTGCCCTTA ATGATTTACA AATTCAACTC GCGCATGCAA AGAAGACACA AGAATTGTCT	4200
CAGCGATATG CCGAGCTCTG TCGGgtCACG CAACATGCAC TGCACAATGT GAAAACTTG	4260
AGAAAATACA CGCACAAAA AGCGCGTATA GCACACGGG ACGTGAGCAG CTCCTTCAGA	4320
CAAAGAACA AATTCATCTC CAAGAAACCC GGACACACGC GGTAGTACTC GCGCGTCTCT	4380
TAGAGCATCA AGAACCGTGT CCTGTCTGCG GCTCTTGCAT TCATCCGAAT CCCGCACGTC	4440
AAGACATAGA TAATCTTGAA CCGTTAACCC GCGCATGCA ACGCATAGAA CAAACATACG	4500
CGCAGcTGGA AACCAGCGAG AAAGATGTGT ACCACATCCT CACCTCTGAG CGTGAGCGmC	4560
GTGCATCCTA CAGTGACAA ATGCAGGAAA TACAGCATTC ATTTTCCATT CTTACATCGT	4620
GTGATACGCG ATCATCCTGC GATATTCCAA ACGTGCAAAA AATTACCGTA CGTGTTTGG	4680
ATCTCACGGA AAAATTATCT CGTGCAAAAG ATATGCTCGC ATGCGCGCAA CACGCTTTAC	4740
TGAGAAAAAA ACAGCCTGAG CAGGATTTAC AGGATGTACG CGCACACCTG CAGCAATGCT	4800
CACAAGAGCT CGCAAAAAAA GAAACAGCAC TCCACGCATT GCAAGAAACG CTTACACAGC	4860
AGCGCGTACG CATTCACGCA CTGTCCATAC GTTTACCCAA GGAATTGCTT GCATCGAACC	4920
TACTTGCTCC GCAAAAGATG CAGCATGAGA AGGAGAGTGT CGCCTATTGG AAAGAGATGC	4980
TCGCACACTG TCAAACCCCTT ATGCGAGAAT TGCACACCCA TATTGAAGAA TACGACCGAG	5040
AGTTCAATGA GATAGAAAAC GCTTCTAGTG CGCTTGCGCG CGACATTGCA GCGCGAGAAG	5100
ATGCACTGAA CCATGTTCAA AAAGAATACA TGCACCTTGC ACGTACCGTG TGTGCGCAC	5160
GAACAGAAGC GCATTTtCAA TAACAACGAR GAAGTAACCG CCGCTCTTAT GACTGATGCT	5220
GAACTTTCTC ATGgCTGCAG CAGAAATTCA ATTTTCAAT GAATTGCGTG CGGCTGACAC	5280
CCATCTACTG AAAACACTCG AGGGCAGAAA TAGGAACAGA AATCCATCC GATCTTGA	5338

(2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 32768 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

CCGCGCAAGA TCCCAGCGTT GATATCGCTC CAACCCCTTA ATCACCACAA AGTTCAAGGG	60
AGGGAATACG CTCCCGCGGT ACCCCATCCC CCGCTCATCA AACTCTGCTT CATCTGCAGA	120
CAAACCTCGGA ATCGGATGGT CCAGCCCAAA CGTGTGAGGA TTCACCAGAT GCTCTGCCAA	180
GCGCTCTGCC TTGTCTTCAT TCGGTATCTC CCCAAGCATA GGCCAGAAGC CAGCAATAGT	240
CTTATGCGGA AGCTGCTGCC CGGAAGCGTC GAGGTCTGG TAAAAGCCAG TACTCGCGTT	300
CCACATAAAA TTATTAATAC GTGTCTTTAG GGTAAAATAT ACCCGCTTAT ACTGAAAGCT	360
CAGCTCCTTA TCGTTGATAA TATCGCCGAG TGCAGAAAGA TAAAAGCGC TCACGGCCAA	420
GGCAGAGTTA AAATCTACCA GATAGGCAGC TTTTTTACGT GGAGAGTTTC CCATCTCCGT	480
AGCAGCAAGA GGAACCCAT AGAGTCCGT ACTCCTTCTA AACTGTGTTT CAATCCACTT	540
CATATAGCGC ACCATCACGG GCATGATCTC TTTAATTCGT TTTTATTTG CAGTTTATG	600
AAAGAGATTA AACTCTGCCC AGGCAAAAAG AGGCATGCCA ATACCCTCAG GATTGGCGCG	660
AGGCAAAACT GGCTCTTTCG TTGCAAGATG ATACTTCCAA CGAATAGCGC CGGACTCCTC	720
CTGCATTGCA TAGAAAAAAT CAAGACACTG CGTGATGTCA TAGTTCCGGT TCGAATACAC	780
GAAGAAAAAG GACGCAAATA TGATTTCATG CTGACTGATA ATTAATCCGT CTTTTTCTGG	840
AAACACAAAA AACGATTTCG TTGTGTTTTT CTCCCCGAA GCAGACAGCC AATACTCCTT	900
TATCCAAGCC CACGTGCGAT CATAGATGTC AACAAAATCC TGATCATAAA AATGAATCCT	960
GGGAAAGTCT CGCTTATTC CCGCATCTCC TCACACATCA CAGGCGACGG AGTGTAGCAC	1020
ATGCaGGGGA AAGTGAGTAT CTACCTTTCC ACCCTGTAAG CTACGCGATG TGCACACCGG	1080
CATCCAGACG AACTAGGATA GTAAGGTGTC AGAGGATAAG CTGGCACGTA ATAATTCACG	1140
CGCCGTACGT TCTTCATCAT ACGGTTGCAC GGTGTGCGCA TAAATAATTG AATGCTCATG	1200
CCCCTTACCC AGCAGCAGCA CAAGGTCCTG CGCACGCGCA AGAGAGAATA TGTGCCGCG	1260
AGCAGCGACA CGATCCGGAA TCAGAAACAG GGTTTTACCC AATTTCTTGT GCTCACAACC	1320
TGCCGAATC ATGCACAGAA TACCCATgGA TCCTCTCCTC TCGGATCCtC ATCTGTGAGC	1380
ACAATTACGT GCGCATAACG AGAGGCAATT GCGCCTTGCA TtGCACGCTT TgCGTGTcCC	1440
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TGCTTAGGGG TGGCAAAAGA TCGCACACAG GTCCGTCCAT CCTTCTCCTG GCAGTTGCTT	27960
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TATTTTTCG GTACGCTCAA CCTGCTGCAG TCGCGTCGC TGACAACCTCT CCTGGCTTTT	28080
GTATTAGGTA CGTGGGTGCG CAGGGATTTC ACCGTGAAGG AAgTTGCGCA ACCGCCCTTG	28140
AGAGTCTGCC TATCGTCGGT GGCATTTTAA TCATTGTGCG AGCAGCGAAG GGGCTGTCTT	28200
TCTACCTGGT GGATGCAAAC GTACCGGACA CCCTCATCGC GTTCTGCGAG CATGCAATT	28260
CATCAAAGTA TCGCTTTTTG CTCCTTTTGA ATGTACTGTT GCTGGGTGTC GGGTGTATCA	28320
TGGATCTGTA TTCGGCGATC CTGGTAATTT CTCCCTAGT GTTACCCCTT GCAGTGCATT	28380
TTGGGGTACA TCCGGTGCAC GCGAGCGTCG TTTTCCTGAT GAACCTTGAG CTAGGTGCGC	28440
TGACCCCGCC GATTGGAATG AACTTGTTCA TCGCGAGTTT TGCATTGAA AAACCGATTG	28500
TGTATCTCAC GCGCGCTATT GCACCCTTCT TGCTAGCACA ACTGGGAGTG CTTCTTCTTA	28560
CAACTTACAT ACCATGGCTC AGCACTGCAT TCCTGTAGCA CCGCGTTCCG GCCACAAGTC	28620
TGAAAAAGTT GAAAAGAAAC GCCGCAGgca TGCTGCGATC CCCGTTTTAT GCGCCGGGTG	28680
CAGCCtCCCT GCGGGGATT C AATTGTCTGT ATACCTTTTC CGCCAGGCCG AATCCACCCT	28740
GCGCGGCTAG CTGCGCACTA AAATGCTCAT AGAGGGCGTC TTCGTATAAC CTTCTGAAA	28800
AACTCCGTT ACCTGCAAGC GTCTGCCCGC TCAACGTCTC GCGCATAGAC TGCACCATCA	28860
CTCTCAGAAA CAGCGTTTCA AGCTCCCGAG CTTGAGTGTA CAGCGCATCA TTCTTTCTG	28920
CAGAACAGGC AGCACCTTGC TCGCAsGGA aCAAGCGTGC CGCGAAAGAA CCACTACCTT	28980
CCATTTTCCC TGTCTTAGAC AGGGTAACGG AAGGAACAGA CTGCATCCCC AATGACAATA	29040
CACGGTGCAC GTTCACTTT CAGTCTCCTA ACGCTTGAGC GCCACTGCTG TGCCGAGCAT	29100
GTGTCACTC GTTTGAATTG CTTTGAATT AAACTCATAC GCACGCTGGG CGACAATCAT	29160
GTTCACCATT TCACTTACTG TAGACACGTT TGACATTTCC AAAAACTTAT GCTCAACCTT	29220
TCCGAATCCT TCAAAACCCG GCCTTCCGGG AATTGGCTGG CCGGACGCAG gTGTTTGGGT	29280
AAACACATTC CCCCCCTCTG CTGCAAgcCC CGCATTTGTT CCGAAGNaTa CAGCTCAAGC	29340
TGTCTACCT CAACCGGATC TCCCTGTTCC CCGACTCGCA CCGTAACGCG CCCATCCTTG	29400
CTAATAGCGA TACTGTGTTT TACGTAGTTT TCGGGAAAA TAATCTCTGG AACGAGACGC	29460
AACCCGTTTG AGGTCACCAA TTGcCGctCC GCATCCACCT TGAACGAACC GTCGCGGGTA	29520

TAAGCATAGG TTCCGTCATA TTGCAGTACG CGAAAAAACC CCTCACCCGC AATAGCCACA	29580
TCTCCGCTCA CACCCGTGTG CTGGAGCGAA CCTTGTTCTGA AGAAGmGCTG CGTTGcAGCG	29640
AGTTTCACCC CGTGCCCCAT CCGTACCCCA ACAGGGGTAA GTGTGTCCTC AGTTGycAGG	29700
CGTACCGCGG TGCATATGGT CTGATACAAC AGGTCTCTGA ACTCCGCACG CTGTCTTTTA	29760
AAACCAGACG TATTCACATT CGCTAGATTA TTCGCTACCG TATCGATGTT TGCCTGCTGG	29820
CCGTTTCATCC CCGTAGCAGC GGTCCACAAA tTCGTACCAT TCACACCTCC CTCTCACTcC	29880
GCTACACGCT ATGCTCGTCT ATATCTTCTT TACATTCTAT AAAACATGCG GACAACTACT	29940
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TTTGGTTCGC CTCATACGCG CGATTACCT CAATCATACG AACCATTTC TTAGCCACGT	30060
TTACATTCTGA CGCCTCAACA AAACCTGCA CTGCAGCCGG ACGTTCAGGA CCTTCCGCAG	30120
CAATAGGGGC CCCTGAAACA GGAGTTTGCA TATACGTATC AGCACCTTC TTTTGCAGGT	30180
AACGAACATT TTCAAACGTG ACAATTTTCA GCCGATCTAA AAAAAACCG TCAACGTCTG	30240
GCCTATCTAT GGGACGTACA TAAATCTCCC CGTTTTGATT GATCGTATAG TATCGCTCCT	30300
GCAGAAAAAG TGGACCATTT TCTCCAGTA CTGGATACCC ATTTTtagTC ATAAGGTAAC	30360
CTTCTACACC GACTAGGAAA TTCCCATTC GGGTGTACTC TTCTCCCTGT GGAGTCCTAA	30420
TCACAAAAAA ACCCATCCCC TCAAGCGCAA TATCCGAAGG ACTTTGCGTT TGTTTAAGCG	30480
AACCTGCTC AAATTcAGTG AACAGTTCAT TCACCTCAAC ACCGAGGCCT AACTTTCCAA	30540
CTATAGGAGA AACGTCCGAA GAACCGAAAG GGTTCtTCAC CACACCATcG TCGTTTACAC	30600
GACGCAATAG GAGCTCTGGA AAACtCTTGT GAAGTGTAC ATCTCGCTTG TAGCTTGTTG	30660
TGTCTACATT CGCTAGGTTT TGCGCAATAG CATCCAGCCT GCGCTGcTGC GCGCTCATGC	30720
CACTGGCTGC GGTATACCAC CCTCGGATCA TACGCCCTC CGCTCCCCCT GGTATCGGGA	30780
GATAGAAAAG GGGAATCAAG AAAATCTTTT TGTCAGTGTG ACTACTTTTT TGATATTcAC	30840
TGAGCAAGTG CAATAATAGG ATCGAGTCTT GAGGCCTGCA GCGCTGGTTT TAATCCAAAG	30900
AAAATCCCCG CTCCCAATGA CATAAAGAAG GCTGTACGCA TACCCGcAGT GCTCAGACTG	30960
AAAACAAC TGTTATCCCTC TGGAGAAAAC ACGGAAAAGA GCCCATAACT GAGCACCATC	31020
CCAAGAATAA GGCCACACAC GCACCCCGCC AGGnTTAAAA GCACCGCCTC GAGCAAAAAC	31080
TGCTGAACTA TTGTTGCGCA CGTCGCACCG ACGGCCTTGC GGAGACCGAT TTCTCTGCGA	31140
CGCTCGGTTA CGGTACTACT CATAATGTTT ATGATATTTA TGCCACCGAC AATCAGCGAG	31200
ACTGCAGCCA CAACCGACAG CACTACACTC ACCATACTCA GAACGCTGCG AAAACTTTTT	31260

ATTTCCTCCG CACCGGACCA AAGGCTCACA GAACCCGATT TGTTAGAGAA AAAGTCCGAA 31320
AACTCCCGGA TACGTTTTTC CGCTGCGGCA ATAACCTGCA CATCGCGTAC GCACACCTCC 31380
ACCGCGTCTG CCACACGACC TGCACCCATT TCTAGAGAAA TAAACTCACG GGGGACAAAA 31440
ACCCGATACG AAGGAATGCC ACTAATCAAA CTCCCCTTTT CCTGCAAGAC GCCTACGATT 31500
TCAAATGGGA AAGACAGTGC ACGTTCTGCA CCCGACGCCC GGGAAAGTAT GGTCACAGTC 31560
ATACGTTTAC CCAATGCATT CCCTTCAGGA AATAATTCTT GCGCAAGCAA ACCGCCAATC 31620
ACCGCACAGT GACGATGGGT CTTAAAGTCC GCTGGAGAAA AGAACGTCCC ATACTCAAGC 31680
TTAAAACTTT TTAACCTCAG CCACCGCGGC TCTACTCCCG TAATGTTCCG TTCCTTTCCC 31740
CCTGTGTGAG GAGAAGAAAT AAGTGCCTTG AGGGAAGAAT TGTA AACAC TCCCTCTATA 31800
TCCTCGCTAC TTTGTACAAG TCGCGTCCGA TACGACTCAG TCGGCTGAAA CATGATTTCG 31860
TTCTTCACAT AATCCCACTC TGGCCTGACT CGAATGAGTC GGCGCTCGCC CTCGCCAACA 31920
CTCTGGGCAA GACTCGCGTA GAGAGACTCG CCGATCGAGG TAATTACCAC TACCGACGCA 31980
ACCCCTACCG CAATACCGAG GAACGAAAGG GTCGTCCGCA GCACACGCTG CCTGAAATAC 32040
AACAGGGTGT TcACGATATC TTCAAGCATA TCCCTCTTTG CAGAGCCCGT yGCTCTACGC 32100
GCGCGCCTCT CCCCTCCTAC AGAAACCTGA CTTACGCAC ATGGCAACGC CACAGGACAG 32160
GCACGCGCAC ACACATCGCC TAGCGGTCTT CCAAAGACTG GATTGGGTCA AGACCCGCGG 32220
CTTGGAATGC TGGATACGAC CCAAAACACA CCCCAATAAC TACTGACCCT GCAAAGGCAA 32280
TAAACATGCC GAcTACGCTA GGAGAAAACG TCATTTGAAA ATCAAACGCA TTCAATCCGG 32340
CGATAACAAT CACGCTCAGT AAAAGGCCAA GCACAACGCC GCACAAACCA CCTACGAACG 32400
TTAACGTGGC CGATTCTACC AAAAAGTGAT GAAGCACGTG CATGCGCGAA GCACCCAGTG 32460
CCTTCCGCAA CCCAATCTCC TGGCGTCGTT CGGCGACCGT CACCAGCATG ATGTTCATAA 32520
TACCGATGCC ACCGACAATC AGTGAAATAG CTGCGATGCC CGTCAAGACC ATATTCATTG 32580
CCCGGAGAAA ACTCCGCATC TGTTCAACGA TAAGATGGAG GGAAGAACT TCAAAGGCCT 32640
TCTCGTTACC GGTGAGATTG GTTAGCACTG ACTTAACTTT GTCTCAACA TGCGCGATCG 32700
ATCCAGAATC GTATACTTTC AAATCCATTG CATCGGCAAT ACGCCGAGAG AACTCTCTTG 32760
TCAGC_{mmA} 32768

(2) INFORMATION FOR SEQ ID NO: 17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8642 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

CGGATACCCC GCAGTGGGCG CCGTTGCCGC CCCCCTCGC TTGGACCGTA CGACAgTGA	60
CGTCCGTGCC GTCTAACACG TAGAAGCACC CCTTTCATC GTCGTGCAG CCGAGGATGG	120
GGGACGTATA GCGGTAAACG TGCCGTCCTT TGTGTAGGTG CAGCTCGTCC CCGAACTATT	180
GCTTTTGGTG TACACGGCCT TGGTGGTTAC CACGTACCCG GTTCCGGAGC CCAGGACGTT	240
TTCATCACTT CCGTTTAA TACCACCATC GGAAGAAGAG CCGCTCCCTC CGCCTCCACC	300
GCCTGAGGAC CCAGAGCTAA GTTCACAGGG CATTTGCAAA AAGGGATTGT CTGACCCGCC	360
AATGCGGATT GCCCATTTG TTTTGCTAA AACGGTTGAA GGCGTCGTGG TCCCTCCCGT	420
TCCTCCGGCG CCGTTGCTGG TGTACGTGTA CACACCTTCC CCCGAAACAC AGGCGTACAC	480
GCACGCGCCT TCGAAACAAT GCTGGTAATC TTTTGCCTG GCAAAAAATT TACTGCCGTC	540
CACCTCCCT CAGACTTGCT CGCGTCCTTT TCCCACAGCT GACCGGCGCA GGCGTACAGC	600
TTGTTATTGC ACTTTACCAA ACCCGTCACT ACCCGCGGA TGCTCGGTAT TTTTAACGGT	660
ACTTCTGACT GGATGGAGGC AAAAATGCCa GAAAAATCGC AGCCGGTTAA GAGACTTGCG	720
CTTAAAAATA ACACCGCGG ACAGACTATG CGGCGCACTA CGCGCTTGC GCCGTCTGTG	780
TGCGCGCGGC ACGCCTTcGC CGCGgCACAG CCTcCACCTG CTTGGACTAC AGCTCTTTCC	840
AATCCTTTCC ATGTCTCCCC CCTATTACTG CCTCATGCA GACGTGGCAC GTCCCCGCTC	900
CTATCACAGG CACAGAGACC CCCCTACCAA AAACAAAGCA CACTGCAGCC CCCCAGGCC	960
GCTATCCGCG CCACCGGGG GGGGTATCG GAGGTTCGCG CGCTTCCtCC TCCGGTTGTA	1020
CCGTTTCTG AGGAGAGACG GCAGATGCTG AAAAGGGTTC CCCTTCCCCA CTTTCTAACC	1080
AGAGACGGTT AACCgCAAAC ACCACACACA ACAGCAACGT CAAATcACGA yTGAGCGGCA	1140
TCGTGCCGCG CTCAAtCGCG TsGAGyTCTT CAAcACCAwT CCAAGTTCC CGCGCAAAAG	1200
CCGTCTTACT TAAGTtTTGC TCACAGCGAA CGCGCTcAAC ACGCACACCC ATGCcTTCCA	1260
TCCTCCAGT ATACTCTAAA ACACCGCCGC GCATAGCCCC GCAGCCGAG CTTGCAACAC	1320
tACGGGTGCA GGGCAAAAg AGTwATGGGA CCGGCTTTT TCTCTCCCGC CGGCATCTGG	1380
GCAAGGATAC GAGGCACACC GTCCGCCTTG CGCGCATCAC CGAGTGCATG ATACGTCCTG	1440
CTTAAGTTGT ACAAGGCACT CCCCAGCCGC GGCAGCAAGC TCAGCGCGT CTCAAACGCA	1500
CGTGCGCCTG ATCGTACTTT TGcTCGGTGT GCAATAGCAG TCCGTAATTG TTCCAGGTAG	1560

CACCGTTCTT CGTTTCCAAG CGGATGGCGT GCTCGTACGC ATTGCGCGAA cCTCAGTGTC	1620
CCCCATATCG TGGAGCACCA CCCCAGCAT GTTCCACACC GCCGCGTGAT GAGGGGTGCA	1680
CCGCAACGCA TGATACAGCG CACCTGCTGA ATCAACCGTA CGCTTGAGCG CATAATAGCC	1740
AAGCGCCAGG TTCAACCACA GAAGCCCGTT GAAAGGACTG AGCCCCAATC CCTTGCGTAA	1800
ACAGGCAACG GTTTCCTCAT ACCACCCCTT GCGCGCGCAG GAAAGCGCAA GACAGTTCAA	1860
AGACTCGGCC GTCTCCTGAA CCCCACGGGg cTGCCGCCCG TGCTCAGGGC ATTCAAATC	1920
TTCAAAAAAC TGATTACGA GTCGTCTTCC TCCCTTCTC GAGCGGGTAT GCGCGCGCag	1980
TATACAGCA GCACCCGCAA AATACGAGCA CCGCGCACAC CCCACCTTCA GTCACCTCC	2040
CCCCAGCCAG TCAAAACCAC GTCCCTGcTA TCGCGCACAC CCTGCGCACT GCAAGAGcTG	2100
CGCAACTTCC TGCAGCCTCA TGGTGCAGAA TGCTCCGGGC CTCAGCGGTC CTAGACGCAC	2160
CCTGCCAATG CGCACCCGCA CTAAGCGCAC GACATCTGT CCCCACGCCT CGAATACCAC	2220
ACGGATCTCG CGCTTTTTC CCTCAACCAG TACAAGCTGT ACACACTGCG CTGCAAGATG	2280
CCGCGCGCGC ACGCACCGAT ACCGGcACCC TTCCACCCAC ACCCCACGCA CAAAAGAGCT	2340
CAACAGCGCT GCAGGGACTG GCTCACGCGT TTCTACAATG TACTCTTTCT CTATTCCsGA	2400
ACGCGGATGG CCAAGAGCmT GCGCAAACGA ACCATCATTT GTGAACAGCA GCGCGCCTTC	2460
AGACCGCACG TCCAGCCGGC CGATGTGATA TAGGCGCTCC TGATACGCAG cTGTAATAA	2520
TCGATTGCAC GCGCGTATTC CTGTTTGGAC GGGCCTGCCC GCACCTGCGT GTGTGCATAC	2580
CCGGCAGGAA ACTGCGGCGC GAGGGAACAG ATATATCCAA CCGGCTTATA CAGGAGCACG	2640
TAGCGCTGAA CTCGTTCAAG CTGCACGACG GTGCCGTCCA CACACACCAC ATTCTGCGCA	2700
CAAACGGTCC GTCCCTGTGT CGTAACCGTC TGACCATCAA CGGTCACACG CCCTGAAGCA	2760
ATCAAGGCCT CACAGGCACG CCGGGAGGCA CAGCCACTCC TGGCTAAATA GACCTGTAAC	2820
CGGAGGCGAA AAAACGGCTG CAGGCGGCAC ACCCTCCCCT GCACCCTCTG TTCACCCGGC	2880
TTAACGGGTA AGCTCAAAGC GCCGCTGCTC TTCTTCATCA AGTTTGGGCA AGTCTGCAAT	2940
GCTGCGCAAC CGGAACGCAG TCAAAAATC CTCAGTCGTG CCATACTGCG CCGGCTTGCC	3000
GGGTATGTCC TTTTTCCTCA CCTCGCAAAT CAGACGGCGC TCACTCAAAA GGCGGATCAT	3060
TGTATCTGCA CCTAmCCCTC GGATTGCCTC TATTTAGCA CGCGTCACCG GCTGCGCATA	3120
GGCCACAATA GACAGCGTTT CCATTGCCGC GCGCGAAAGG CGCCCTTCGC TCCGCTTCCC	3180
ATAGAGGGTT GCAAGACGCT CCCGTACGGT GCCTCGAGAG ACwACGCCAC ACCCTGCTCG	3240
TTGCAGTGAA GCTCCAGTCC ACCACCACCA CGCGCGCCAG AAGCGAGAGC TTCACCCAAA	3300

CGCGCAACAC	ACTCACCCAC	TGCCTGTTCG	CTCAAACCGA	GCTTTCGTGC	AAGACACGCA	3360
TAACTGAGCC	GCACGCCTTC	GACAAACAAA	ATAGCCTCCA	GwAGCGCAAG	GTCCGGTGCG	3420
GGTGCTCCGT	GTAGCGTGCA	AGGCTCTGCT	TGGTCCATCC	TGCCgATGtA	CGCTCTTTCC	3480
tCCCTCCTaC	AAGCACCCAA	TGCAATCTAA	CGACAGGGAA	GACGGCACCC	GCcTGTCTGA	3540
cTTCCGTTAC	GGATTAAAAT	GACCGATCTC	CGGCGCACGC	ACCCGCACCA	ACGCAAGCAT	3600
CTGyTGGGGa	TAcTGCCTa	CAAACTCTTC	AAGAGTGCTC	AAACGCGCCG	CTTCAAAAAC	3660
CTCTACCTGA	AATCTCCCTG	ACCGATCGAA	ATACGGCAAA	AACACTGCCG	CACGCTGGTA	3720
TTACGCAAA	CGCGGTtACG	CCACGCTCCT	CATTGAGCAC	GCCAAGATAG	AAgTGGCCTG	3780
GTTCCATAAC	TGCAAGATAG	TAAAAGAGCG	CACGCACATA	CCCGGTCTGG	TATCCTGCAT	3840
GCGGCAAGTA	CCCTAGGTAC	CGCGACGGCC	CAGCCGCAGT	TTCACCCCTGC	GTCACACGGG	3900
GAGGAACAGC	ACCCGCAGcG	TCGACGGGGG	CGCAATACCC	GGATGCCGCG	CCTCCTGCTT	3960
TATCCTCCCT	TTGGGGACAC	CCTCCACTGC	AAAGGGTTCT	ACCGTTACGT	CCACACCTCC	4020
CTGTGCGGGG	TACACCGTGC	GCCGCACATT	AAGACTCAAC	GCTGCCGCTG	CCAGGTTGCG	4080
TATCCAGTCA	ATGCCAAAAA	AGGGTkCGCG	TGCGCGCTCA	TGCGCCGCGT	TAAAATGAGT	4140
ACGCGGcATA	GTCGTCTGcT	TTTTTAGCGC	AGACAGGTAC	ACTCCCTGaC	CGGCAACCGG	4200
CGCAATGATC	CCGTCTACCA	CCCACTTCGC	AAACCCAAGA	GATCCCACTC	CCCCGATAAT	4260
CTCCCGCGGC	ACTTGGTCCA	CACGCAGGGC	ACGATAATC	TCTTGGTCAC	TTTGA CTGCT	4320
CCCGTCAGAA	ATGTGGACCG	GGCKTCCCCA	TTCTGTTAAA	CATCCATCCT	CAAGTGAGC	4380
GAGCCGGTAA	CTCCTGCGCT	TAATGATACT	CGCCATTGAC	TCTACTGCGC	TGTAcGTGCG	4440
CGGCGGATCA	AAAATACGCC	ACGGCACCGC	ATGcTccGTA	AGCGCCCGCA	GCTGCAAAAG	4500
CGAGTaGGTA	TACAACTGTT	CAAAGGACAA	CCCAAGCgCc	sTGyTTGCGC	acGTGCACGT	4560
TAAAAAGACA	CACATCaAGA	TGCGTCTTTC	CcTGcATTTC	TACTGCAGTG	GGCGCAGAAA	4620
GTTGTACATA	CAGCGACGCA	CTTTCGCGCG	GGTATACCCG	TnATGaCACC	GGCGCACCGG	4680
TGTGCATGTG	CCGATACAGC	ACCCATGTGC	CTTGCGCCAC	AGCTTGACTA	GGCGCagCGT	4740
cTGTcACAGG	TGATTGCGGG	GTATCTGCGC	CTGTCTTTCC	CGCCCGACTT	GTTCTGTGG	4800
GCGCCTCGAG	CGCGAGGTGC	AGCCGAGGCG	CCGCTGCCAC	TGGCGCAGAA	TGCACACCAT	4860
CCCTTGGGGC	ACGATCAGCT	AAAAGAGGCG	TAACGCGCAC	TGCAAGTGGT	CGGTTGCGGC	4920
AATCACGTAC	GCCTCAACGC	GAAAGcTATT	GCCCCGTTTCG	TCCGTGTAAc	ACGAGgTGCA	4980
CGCArCGCAA	CACGAGACGG	CTCATCCAAA	AACCAATCtG	CGCGATAACA	CgNCnCACAT	5040

GGTGCAGATC GGGGATGCGC TCAAAGGGCA ACAGCGGCAA ACCTCCCCT GTCTCTGAAA	5100
CGCCGGAGTC AACCATGATT TCTATGGaGT ATTTCTTGCT CAGCTCCTCA TCCACCTCAC	5160
TCGCGCGCag CAGCCCCTGC AGCATTATCA CCAAACCTAT GCGTAACACA CCgCGCGCAC	5220
GCgCAsCCAG ACAGCTCATA CGGCCCCATA TCGGCGCACG CGTGGGCGGG AAAAAGCAAG	5280
ATCTAACCGT TCCCATTGCC CACAAACCCc TTGGCAGGTG CATCCTGCTG TGCTAgGGTG	5340
CGCCCCGCTtT GcACCCTGcA GCTGTCCTGT GTTAAGGAAG TCAAGATACC ATGAACACGC	5400
GCCTCGCTcT TGTCTGTtGT GCGGTGGGAT CTGGcGTGCT GTCTTTCTCC TGTGCACGCA	5460
CTGcCGAACC GACCCCCGCA GCTTCCACAC ACGTCCCTGT CACCACCGCC GGCGCACTCA	5520
GTGTACACACC GCCTTCGAGT ACTGACCGCT GGTACCAGTT CTCACGCACG GACGGACGAG	5580
TGCACCTGCG CGCGTGCCCC GCGCCGTCTC AGCCTTCTGC ACCTGAACAC TTTGTACCCT	5640
GGACTGAGGC TGTACgCTG TCGGCAGTGG ATGCACAGCA AGAACTCTTG CTCATCAATC	5700
GCGCCGGAGT ACTCCCAGCC ACGCAcTAGC CCGCATGCAG ACCGCACCGG TTCCACGCAA	5760
AGCACCTCC ACACCCGCTG CGGAGACGAC ATCGCTCACT CTGACGCCCC CCGCACTCTT	5820
AGCCACACAG AGCGCTGAGG GCTTTTACTC AGAGCCAATC CCCAACAGTT CCCCCACCC	5880
TTGCCAGGGT ACCGGTGcAG TGTTTGTTCG TCTCTACACC GATCCCCCTT TTACCCTTC	5940
ACCACAAGAC TCTGCAGCTC CTTTTCTGGT GCGTTACGAT GTGCGCACCG CTCGCTGGAC	6000
TTCTGTGcA TACACGCGmG CTCTGGGaTT GCCCCGGAAC GCCCAATGCA cCGCCCTcAC	6060
CCATACTCGc GGCACCTGGT ACGCTTCCTT TAAGTCCTCA GAAGCAGAAC GCGTTTCCTT	6120
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TGCCGCGTGC ACTCCCCAGC GCCTGcACCT TCCGACGGc TCCAcTTCTT CTGaTCATCA	6300
CAGCGACCTG cACGAATTGC TTGTGCATCG CTTGCTTGCG CGCGTACCTC TCTCTCCCCT	6360
GTACCTTTCT GCGCGAAcCC GTGTTGGGCA AGCGATCGCT CTTTTTTAAA GACTGCCCAC	6420
CGCACTGCTG ATGAGCGTGC ACACCACGCG AACGnGCTCA TTTTTCATCC ACCGCGCGCA	6480
CGGCTTTCTG CCGCACTCTT AACAGATTCA GGCCACCTCT ACTTTGTACG AGAAGACGGC	6540
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CTCTCCGCC CCTCCCTCAT TGCAGGGTGG GAAGAACAAG ACTTCTTTCA GGTAGGTAGT	6660
ACAGGTCTTT TATGCACCGA GGTAGAATCC CTTACAGGAA CATAAACGCT CCCGGGAGCC	6720
TGCTCTATGT CCTACAAATT CTGTAAGGAC CCCCACGTCA GGTGCCGACA CTACGTTGGC	6780

AGGGGTGGCG	GATGAAGCTA	AAGCGCTCAT	TAATAGTCGG	GGGAGGCCTG	TTGCTTTGCT	6840
GTGCGCACGG	ATATGCGCAG	GCGAAGGGAG	CACGGGCGTC	TGTGCATATT	GCGTACCATA	6900
ATCGCACGAT	TTACTTCCCC	GGCACCCACG	AATCTGAACC	CATTTGGGTG	AAAGTTTCAC	6960
TTACAAATAC	GGGAAAGGAC	ACGTTGCGCT	TCAAACCTGGC	GGACGACCGT	ACCTTTAGTG	7020
TTGATTTTTT	TATACGGACG	ATGAAGAACC	GCGCGCTTGC	gCACACGGAC	GAATGGATAC	7080
GCAAGCGGAG	CACTCATCGT	CCTGTGTATT	TTAGGGAGAT	CAGCCTTGAG	CCGGGGGAAA	7140
GCTACTCTTT	TGTGGAAAAT	GTGAAGCATT	ACCTTGATGT	GCAGTCGGCA	GGGTGTACT	7200
TTCTAACCCCT	TCTCTTCTAC	CCCGAACTGA	AAAGGGAGCG	CACCGGTGAC	GAGGACCATC	7260
TGGCATCTAA	TACGCTAACT	CTTGAGGTAC	AGCCTGCCCC	TGCTGCGGCG	GCGCTCGGCG	7320
CGTTGCCGGT	TTCTCCCCCC	GTGGGTGAAG	TTCTGCAACC	GCAACGTCTT	TCCCCGATA	7380
GGGTATATCGA	GTACGTGCTG	AATGCACGGC	AAAAATCTCA	CTGGGAACGC	TTTTTTCTGT	7440
ATCTTGACTT	GGCAAAAATG	CTTCTCGGG	ATGCGGGGCG	CAGTCGCCGC	TTTAACGcAG	7500
AGTCTGAGGC	AGGACGCTAC	AACATGATTG	ATACCTATAA	GCACGagTAC	GCCAGGAGCG	7560
TGTGGATAAG	GATATTGCTG	CCATACCCGT	TGAATTCCGT	ATTGAAAAAA	CCGTGTATAC	7620
TGCTACGGAC	GCGGAGGTTT	GCGTGCTTGA	GTGGTTTGAG	TACCGGGATT	TCCGGGAAAA	7680
GAAGCGCTTT	ACCTATCACC	TGTCCTCCCG	CGACGGCATC	TGGTATGTAC	ACGATTACGT	7740
AGTTGAGAAT	TTGGGAACAG	AATGATGAAG	GCACTTTTAG	TCGCAGATGA	TCCCGTTTCG	7800
GTGAATCTGG	TATTTGAAAA	CCACACGCAG	TGCGGTTATG	AGGTGATCCA	tACCGTTCTG	7860
CGCTGAAAGC	CTTGACAAT	ATGGAAGAGA	TTCAGCCACA	GCTGCTCTTC	ATCAACGCCA	7920
GCGACTTTCC	GCGACACTGG	AGGGTCCTCA	CTCAGTTCTT	TAAACATCAG	TCGGTGTGCG	7980
GAgCGCGCGT	AATCCTGCTA	GTGAACACTC	CGTCCTCCTC	TCTCAGCGCG	CGGCAGGTGG	8040
CGCAGGCAGG	GGTACACGCG	CTTATCGATT	ACACTCTATC	TCCGGAGGAG	GGACGAAAGG	8100
CTTTATGCGG	CGTGCTCAGC	CCCTCCGCGT	GCGCAGGCTC	TGTCGACGTG	GGTCATGCGC	8160
ACACCTGCCA	GGCAGATTTT	GTGTTCAAA	ACCCCTGTAG	CGGCTCTATT	GTCACCGGGA	8220
CCGTACGGGA	AGTGAGCGAA	GAGGCGGTAG	ACTTCATCCC	CGACTTTCCC	GCGAGCGTCA	8280
ACAATCTGCA	AGAGCAGGAT	GTA CTGAGC	ACTGTGCGCT	AAAGGTAGCA	CACGACATTC	8340
TCGGTGTTTCG	CTGCTCGTTC	CATTCATCGG	ACGGGCGCAT	CCTGCTACGT	TTTATAGATC	8400
CCGATGCGTC	ACTGGTACAT	GCAGTACGCA	GCGTCACAGG	TACCACATAG	CAACGGTACC	8460
CACACACACC	CCAAGCAAGC	AAATGGCTGC	GTAGACCCAG	GTGGGCAAGG	CCTCTTCGGC	8520

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ACGGCGGGGG GCTCctTCGG TGCCGGGGGG CTGCCCTTTC TCCGGTTCTC GTTCCCGAAC 8580
 GCATACCCAC AGGAAGGnCA GCCCTTTTCG AAGTCTCTAG CGTTTCCTGC GTGTTTGCAC 8640
 AA 8642

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6761 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

TTCTCCATGT TATGAGATTG GACTCCTCGT TGGAAACGTT CCTTTCAGAA nAGATAGCGT 60
 TAACCGTGGA TTCGtATCA ATATTGACGC TCTCTCTCGA TGAACAAAGA CAAGTTCTGC 120
 AAGCGGTCCG CACCGTTTTT GTTCCACAC GACAGGAGGG GTATATTCCC GTGTGCTAA 180
 CGACGGATAC GATTCGTAGC GCAATGTGGA ATTTGTTTTT TTCAGATCGT ATTGAAATCG 240
 CAGTTATGTC CTATAAAGAA GTTTCTACCG ATATGCGTAT TGAAACAGTG GGAGTAGTAA 300
 GGATAGAAGA GAGTGATGTG GATGCTTTTG TGAGAAAGCA GTAGTCTTCG GGCACAAGAT 360
 GGGTGGAGGG TTTGATAGGT GGAGTTATTA GTAGAAGTTG CCCCACGAA GGAAAAAGCG 420
 ATAGAGAAAA TTCGGAAAAA GTATGGAGAT cGAGTTAATA TCCTGCGCAC GCAGAGGAAT 480
 AATAGGAGTT TCTTTTTTGG TCTCATAGAA CGAGTCTCGG TAGAGATTTT TTTTCTGTGTC 540
 AATAGTGGAT CGCAATCATC AGTACACGAG ATACCCTCAG TGCAATCgCG TACGctGTGT 600
 CCGCTGCTCG GGTAGAGGAT ACTGAAGCAG AAAAAATAAA GATACTTGAA TCTGCGCAcG 660
 TATTAATGCG AaGATAGCAC AGCAGGTAGA GCCCTTAATT TCAGCGGCAA AAGAGAAGAA 720
 AACTGAAAAA GTGCCAACTT CCCCTGAAGC GGTGCATGCG CTCACTCAA CGCTAGAGGG 780
 TATGATCCAG AAGATcACGA ATAGTGCGCC GGTGGTGATA GCACAGGAGT TGCAGTCGAT 840
 TCAAAGAATC GAACTTCTTT TAGAGGAAAA TGATTTTAGT TTTTCATTTA TAAGAAAAAG 900
 TATTGCTCGT CTAAAGGACG AACTCAGTTA TCATGATTTA GAGTCTTTTCG AAAAAGTTGA 960
 ATCAACAGTC CTGCGATGGA TTATAGAATC AGTCCACATT CAAGTTCCCC CTATTTGTAC 1020
 CGGAACAAGA AACATTGTAT TAGTAGGACC GACTGGTGTG GGAAAAACCA CTACCCTCGC 1080
 AAAGCTTGCC GCGTTCTATT TTGTTACAGA ACCGAAGCGA ACTGGTATTC AGCCACGAGT 1140
 AAAAATCATT ACAACGGACA ATTTTCGTAT TGGTGCAGCG TTTCAAATGG AACGTTATTG 1200

cGAGCTTATG GGACTCGATC TGTGTGTAGT GCAAGCACCG GTTGAGTTTT TGACGTACAT	1260
GACACTGTAT CAGCAGGAGA CCGATGTGGT CTTTGTGGAC ACGGAAGGgA GGAGTCCGGT	1320
TGATGGACAG AATATAGAGC GGATGGTGGA ATACTTtCGT GCGGTAAAAA ATTTtGAAct	1380
GGAAGTGTAC CTTACCATtG ACGctGGATC GAAGGCGAAC GACTTGCGCG AGGTGTTTAA	1440
GCAATATGCG CTTTTgAGTA TCGTGCGCTG ATAGTAACCA AACTtGATGA AACAACAAGT	1500
ATTGgAaACC TCATTAGTGC GTTGAGTGAG GCAAGGACTC CTATCACCTA TATTACGACA	1560
GGACAAACGG TTCCAAGCAA TTTAGAAAAG GCGTCAGTAA ATTTACTACT TTCTAAATTA	1620
AAAGGTTTTTA AACTTCTTGC TGAGGAGATG GGCAACGACT ATGGTGATTA CGGTAGCAAA	1680
GAGAGATAAG CGCATAGCAG ACCAGGCAGA AGAGCTGAGG GATTTGATGC AGGAAAAAAA	1740
TGCGCGGGAG CtGTTGAACG TCATCAGCAT AGAACGCGTG TTGTCGTGGT AACCAGTGGA	1800
AAAGGCGGGG TGGGAAAGAC GAATATTGCA ACGAATATGG CAATTGCTTA CGGGTACATG	1860
GGGAAAAAGG TGGTACTCAT AGATGCAGAT CTTGGACTTG CAAATGTGAA CGTGATAATG	1920
AACGTTGTTC CCCAGTATAA TTTGTACCAT GTGATCAAAA AGCAGAAGAA AATGTCTGAT	1980
ATCATCATCG ATACTAATTT TGGTATCAAG CTCATCGCTG GTGCATCAGG GTTTTCCAAG	2040
ATTGCaAATT TAAACGAAGA AGAGCGTGCA GCTTTTATCC AAGAGTTATA TTCTTTATCG	2100
GAGACGGATA TCATTATTAT CGATACAAGC GCTGGTGTtT CGAAGAATGT CGTAAGCTTT	2160
GTGTCATCTG CCGATGATGT CATTGTTGTG ACCACTGCCG AACCTACGGC AATCACCGAT	2220
GCGTATGGAA TGATAAAGAT CATTGCAACT GAGGTTGATA ATCgGGATAT GAACCTGAAG	2280
ATGATAGTAA ATAGAGTGAA TTCTGCCgCA GAAGGAAGAA GGATCTCTGA ACGCATGATA	2340
CAAATTGCAG CTCAGTTTTT AAATCTGAAG TTAGATTATC TGGGCTTCAT TTATGACGAC	2400
ACcTCGGTAG GTGCGAGCGT TCTCAGACAG GTCCCTTTTT TAATCCACGA GCCTCGGGGG	2460
AAGGCCTCCG TGTGCTTGCG CCATATCGTG GCAAAGCTGG AAAAAACAGA GATCGCCGAG	2520
ACAGGCGGGC TTTCAGGTTT TATTGCGAGG ATATTTGGAA GGAATGGGA ATAAGGCTCC	2580
CCCTTTCCCT ACCGACTAAG ATTGATGAGA AGTTGGACCT CCCCCAGTGG CTTGCCGGTC	2640
TTTTCCGCAA TGAACCTCAGG GGCAAGTCCC TTCTCAGATA GGGCGATGAT GGCGTCTTTA	2700
AGCAAAGGGG ACTCAGCTCT CAGCCCGTTG TCCCGAATGA TTTTCTCGTT ATAAACCTCA	2760
ATGGTGCCAC GCTTGGTAGG GGTGGGTTTC GCTGCACTCG ATCCTGCGCG TGAAGGAGCG	2820
CTCCGGTGCT CAGGTCGCGC GCAAACCTCC TCCCGAGTCT CCTGCCCCGC ACCCGATGCC	2880
CTGAACAGGG TGCAGCCGT GTGCTCCTTA AGTATTTCTT CGTTAAGAAG AGTGAGTTTT	2940

CTGTTCGATCG	TGCGGACGAC	CTGGTTACAC	TCTCCTATCT	TCTTCTCGAG	CATTTCACG	3000
GCAATGTCCG	CTTCATACCG	TATATCTCGA	ATCATCTTTA	TCACTTCCTG	TTGCATCGTT	3060
TTTCGCATAGG	CGTCAGGAGA	AAACTCGTA	CGCACCTTCA	CGTAGAAGTA	CACAAGCAGA	3120
GCAACGGCCA	CGAAAGAGAA	CGTAATCGAC	ATCACCAGCA	TAGCGTATTC	CTCATTTTCG	3180
CTGCGTATAA	GGAAAACCTTA	GTACGCATAA	CCTGAAGGGG	CTCTTTTATA	ATCTTCATCC	3240
TGTTTCGCCCC	TGTATTGGCC	ATAGCGAATG	AGGCCATTGC	GTAAATAAAA	ACTTATGGCC	3300
GTGCTGTCCG	CGCGCACCTC	TTGCTCAGC	TCTCGAATGG	TGACTTTTAC	ACCAGAATAC	3360
ACCTGTCTCTG	AGGCAGAGAT	TTTCCCCCTCG	ATTGGAGAAG	CATCCAAGGA	TGCCTGAATC	3420
TCTTCGAGCT	CCGCGCGCGA	CTGCTGCACT	AGCTGCTCGA	GTGAGATCTT	TTCTTCATGC	3480
AGACTAGTCT	CAAGCGCCTC	CTTATCTGGG	GGAAGTTCTT	TACGCGCTCT	CTTTAAATTC	3540
TCGAGGGATT	GGAGGTTCAA	AGACAGATCG	GAGAGTTTTC	GTTTCATGTG	GTGCAACTCT	3600
TCCTGCAACA	TGCTGAGGCG	ACGTACACGG	TGCGGATCAA	AGCCGACGCT	GATTTCGCTG	3660
TCGTTGCCGC	CTGATTGGCT	GCCTAGGTTG	CGCGCGTAGA	CAGCCTCTGC	CGCTGCAACG	3720
TTACTTCCGA	TGATGTCGGC	ACGCCGCCCA	CGACAAATGA	TTTTCGGGTT	AGCAATGACG	3780
TGCGAGTTCA	TAATTCCGTC	AGAAACAATG	ACAAGATCTC	CTGCTTCAAC	TGAGGCGCAA	3840
TTCTGGATGA	ATTTAGCCCA	CAGAGATTTG	CCTGCACGAA	CGCATCCTTC	CTCCTTTCCC	3900
ACAATAcCTT	GTCCGACTAG	AATGTCCCCT	TCTGCATCAA	GCAAGGCCTT	TCCCACCGTT	3960
CCGCGCACTT	CGATGTTGCC	TGAGGCCTTA	ATCTCGTAGT	TATCCTCAAC	GTTTCCGTGT	4020
ACCAACACGG	TACCAAGGAA	CATAATGTTT	CCTGTTTTTA	CAGAGACGTT	TCCTTCTACC	4080
ACATAGATGG	GTTCTACGTT	GATGCCCCCT	cGGGAAAGCA	GGGCTTGTCC	GTCAGTTTCT	4140
GCAATGACCG	TAAGGCCGTC	aCGCGCAAGc	GCTGTGTTTC	TTCCCAGAGG	AATGGACACA	4200
TCCTTTCCCC	ACTGTGcCGG	AAGATACGTG	CCCGTGACGG	TTTTTGCCAGG	AGTACCCCGC	4260
TGTGcAGGCa	GCTTCTGCGC	AAGCGGCTGT	CCTTTGACCA	CGTTATGAAT	GAGGTTTAAC	4320
TCCTTAAAGT	TAATCTTCCC	CGTCTTGAGC	TCTTGCAAGT	GCACACGGgT	GCGGTCAGTT	4380
TCGAAGTGAT	AAGAAATCCT	CGCATTTTCA	CCGTCCTTTG	GAGGGGTGCC	CCGTGCAACG	4440
AGGTAGGGTT	CATGGTAAAC	CGGACAGTCT	TGGAACGAAT	TGACGCGTTC	CATGTCGATG	4500
CCGTACACAA	CCCGATTGGA	GCGCAAGAAA	GACAAGATGG	TGTCCGCGCA	TATGTCAGCG	4560
CCGTTCCGTC	CAGGGGGGGT	GGCAGTTACA	AAGGCCTTCA	TGTCGTTTTT	TCGGATCTCC	4620
ACAGAAAGCA	TTGCATCATG	TGCAGGGATA	CGTTTCAATG	AAGAAACGTG	CACGTAGCTG	4680

TTCGTAGCGT	TTTTTATCAG	CACCTTGAGA	GTGTCAGCGG	GAGGCAGGGC	AAGGCCGCGC	4740
GCGCGGAACT	TTTCCTGGAC	GCTGGCGAGT	GAAACCTTGC	GCCCTTTACC	GAGGGGAGCG	4800
GTGATTTTTA	AAAAAACGCC	CTCTTTTGTG	CAAAGTACAA	AnGCTGCGCC	GTCGTGTCCG	4860
GTGTTGGGGG	AAGAAGACAC	GTCCCGGTGT	GAATCGTGCG	GTGCAGACAC	GTTCCCGGCA	4920
GCGAACTCCA	GTGAAGAGCT	CTCGTAGGCG	CGGATTTTCC	ACTTTTPTTG	GCGGAAGGAA	4980
AAGAACTGTC	CAGCGCCTCT	TTCGAGCACC	TCGTATTCAA	CGCGGTATTT	CGGTATTCCT	5040
AATTGAACAG	CAGCAGCCTC	AAGTGCCTTA	TCAAGTGTTC	TTGCGCACGC	ACTGACGCAG	5100
ACACGCTTAG	AATCCTCCTC	GTAGCGTTTC	TGCATATCGC	GGCGAATTTG	ATCAAAGCGA	5160
GTATTCATAG	GGAGTATTAC	CGGATACCCT	TTTTGATGTT	GGTGAGCTTT	GCCTTTAACT	5220
TTAAATTCGC	GCTGGTGTGG	ATCTGAGAGA	TACGCGACTC	GGTCACTTTG	AGCACCTTGC	5280
CAATCTCCTT	TAAGGTCAAT	TCTTCGTAGT	AGTATAGTAT	GAGCACCTGC	TGCTCGCGTT	5340
GAGAAAGTTC	CCTAATgyc	TCTGcgAtGa	tAcGctTgat	TTcCtCgcgt	TcgaCaATGA	5400
CGTCGGGATT	GAGAGAAGCG	GGCGCTTCGA	TGCTGTCTCC	CACAGAGACG	TGGTCTCGCT	5460
CATCTCCACC	AAACTTCGAA	TCGGCAAGGG	AAATCACGCT	CGTGCCGGAC	ACCTTCAAGA	5520
GGAGCTGGTG	GTACTCTTCA	AGCTCAATAT	TCAGCGCGCA	CGCGATCTCA	GTATCTGTGG	5580
nCAwsACcCC	AAGGCGTGCC	TCTAGATCTG	CAATCGCTTC	TTCTATCTGG	CGTGTTTsTG	5640
ACGCACCACG	CGGGGAACCC	AGTCGATGGA	GCGCAGTTCA	TCAAAGATAG	CACCGCGGTA	5700
TGGCGTAACC	GCGTACGTAT	TAAATCGAAT	GTTTTTTTCT	GGGTCATATT	TATCGATAGC	5760
GTCAAAAAGA	CCAAAGATAC	CGTAGCTTAC	GAGGTCATCG	AACTCAACGT	TCCCCGGTTT	5820
CCCAACGGCA	ATTTTGCTTG	CAACGTATTT	GACCAGAGGA	GCGTACTGCA	CAACAAAGTA	5880
CTCGCGTATT	TTGCGCTAC	GnkTCCTCCG	ATACTCGAGC	CAAAGCTCCT	CTTCCGACTG	5940
CTGTTCGAAG	GCTGTGTTCC	CCATTCCCGT	GCCCTCTACT	GTTATAGCTG	ATTTCAGAAT	6000
GAAAATACAA	GCCGGCTCGC	TAGGTGTCTT	GGGAGAGCAC	GGTTCGGATG	GCGCGTGCCA	6060
TGCGTTTAGT	CTCGGGTAGG	TCAGTGAGAA	CGTCACCGAC	GAGATCAGAG	GTCTTGTCTT	6120
CGAAGGAAGG	AGTAGACGGG	GAGAAAGAGT	ACCCACGCTC	GCCGAGCTCT	CCTGTAGGGA	6180
TGAGCGAGTC	AAAGCTGTCA	TCAGTTTCCT	GTACGACATC	GCCACCCGGC	GACGCAAACG	6240
AAGGCTCGAC	CACGTCATCT	AGCGTCAGAT	CCACATGAGG	GATGGGCATC	TTCCCATCTT	6300
CTTGAACAAG	GAGGTGCGGA	ACCACATATG	CAAGAAGGGC	CCGCAGCgcG	TACGCGGTAA	6360
CTCCTGCGCC	TAAAGCAAGG	ACAGTCGCAC	GGGCGACCGA	CACATACACG	CGygCGcGct	6420

acCGCCGCTG TTGCAATGGA TAAAAAGAAC GCAGCGCCAG CTGCAATcGC AGGTACCTTC	6480
AAGGAGGCAC CAACTGCAGC ACAGGAAAAA CGCCGCTCCT GCACGTCCAC GGAGCTAGTC	6540
TGCAGCTGGT TTTTGTTC GTCAAGGACC TGTTCCTCAAG CGTGTAGTGT GAGCTATGCG	6600
CGGCACACCC GCATACCACG CGGTGAGTGG TGTGCCGTGC AGCGCTTGCA CGTGTACACA	6660
GGTGGCAGTA CAATTGGCCC TCTCTGGAG GGGGAGTATG GGTCGTTTGA AnCGGTGTGA	6720
GGTTCGTCGC CGCCCGTGC CGCTTTGGGC GATCGTACGC n	6761

(2) INFORMATION FOR SEQ ID NO: 19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19217 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

AGTGTCCGTT TTGTTTGGCG TGGTGTGCGA TCATAGTTGT AAAAAGCTCC ATGCATACTC	60
GAGCGTCATC CTCTGCTCTG TGTGCTGcGT GTACCGTAAG TCCAAACTGA AGTGCAAGAT	120
TCTGCAGACG GTA CTGATGG CGTCCTAACC CGGGGAACAC CGCTTGGGCC ATCGCGTACG	180
TATCAACTAC TTTGTGAGAC AGGGGTTGCT TTTTGACAG GCTGAGTTCT GCATTGAGAA	240
ACTCGACATC GAAGTTTGGC TTATGTGCGA CGAGTACTGT CCCTTTGATG AATCGAGAAA	300
AGTCTGAAAC TATCTCACAA AAGCGCGGCT TATTGACGAG CATATCGTCG GTAATATGGT	360
TGATTTTGCT CACGTCAGGG GGTATAGCCC GATCAGGGAA GATGAGCGTG CTAAAGCGCG	420
CAATAATACC CTTCGATCA AACGTTACTG CACCAATTC TATAATGCGA TCTTCTTCTG	480
CTTTTAAACC AGTTGTTTCG GTGTCGAAGG CGGTGAATGC AACGTGTTCA TGCACCGCAA	540
AAACCAATC ATATATCATT GCAGATATGT ACCCATCTCT TGTTCAACTG CGGTGATAAA	600
CATGTTGCCC GCCTGTTCTG CTTCTTCTAT CGAGGTACTG ACGGTCAGAG GGTGGATGAT	660
ATAACACTTT ATTTTTTGTT CTGTTCCACT CGGTCGTATA CTTACAATAC TGCCATCCTG	720
TACAAAATAC TGCAGCACGT TACTCTGAGG AAAAGAAAGG GCAGATGTCT GCGCAGGATT	780
TTCTGGACTA AACTCAACAC CAAGATATAT ATCCCTCACC TTCATTACCC GCTTGCGCGC	840
AATTTGGGTT AGCGGCTGTC TCCTGAGCGT ATTCATTATT GCATTGATGG TGCTTACACC	900
CGCGACGCCC GCATAGGTTT TGTTTCAGCGT CTTTTCACAA AACAGGCCAT GCGTCCTGAA	960
TAAGTGGTGA AGGCGATCGA TCAGGCTCAT TCCGCGCAAC TTCCAGTACA CACCCATTTT	1020

TGCACAGAGC	GCTGCGGCGT	TGATACCGTC	TTTGTCTCTC	ACCTGAATAC	CAAAATTGTG	1080
TCCGTAACCTT	TCTTCAAATC	CATATACGTA	GGAGTACGCT	CCTGACTGTG	AAATCTTTTC	1140
TGCAGTACCA	CATATCCATT	TGAATCCGGT	AAGGcACTCT	ACACACGTTG	cGCCATATGT	1200
GCGTGCTATA	CGGTCGCTAA	GTGGGGACGT	AACAACGGAG	CGTACAATTG	CAGGACGCGC	1260
GGGCATATTG	TTTGTTCCT	GCAGGGTTAG	CAGAATGTAG	TCAGTGAAGA	GCGCTCCCAT	1320
TTGATTGCCC	GTGAGCAACT	GCAACACACC	GCGGGTGTTC	CTTACTGCAC	ATGCAAAGCG	1380
GTCTGCGTCA	GGATCAGTCG	CCATAAGAAC	CTCAGCATGT	ACGCGATCAG	CATATGCACA	1440
CGCATGCACC	AACGCGGCCG	GATCTTCTGG	ATTAGGAGAC	GACACCGTAG	GrAAGTTCCC	1500
ATCTGGCAAC	CGTTGCTCAG	GCACGGTCAT	AATGGAGAAC	CCCATATCCC	CCAGTATGCG	1560
CTCGACGTGG	AGTGCACCCG	TTCCGTGTAA	TGGGGTGTAT	GCAATACGCA	TCGACTGGAC	1620
GGTCTCTTTC	GTAAGACCGG	GGCGAAAAG	CTTTTCCTTT	ATAGAGGTGC	AGTACGGTTC	1680
ATCAATTTCT	GCATCAATGA	TCGTGGGTgC	ACTGCGTTTG	ACAGGTACCT	TTTCTCAAG	1740
GTPCACGACA	CTCGTGATAG	CGTTCATTTC	TTCGGTGATA	TTTTTTTCGT	GAGGATGCGC	1800
TATCTGTGCC	CCGTCGTTCC	AGTACACTTT	GTATCCGTTA	TACTGCGGTG	GGTTGTGCGA	1860
TGCGGTGACC	ACGATGCCCA	CGTCACAGGT	AAGATACTGT	ActGCGTAGG	AAAGTTCTGG	1920
AGTCGGGCGT	GGATCCGAAA	AGAGGTAGGC	GGTAATGTCA	TGTGCAAGAA	ACACGTGCGC	1980
AgcAGTGTGT	GCGAACAGAC	GAGAATGTAC	ACGCGAGTCG	TAGGCTATAA	CGGCACGGaG	2040
CGCGCCGCGC	GCTGcCTTTT	CAGGAAAAGT	TTTtagTAAA	TAGAGCGCAA	TCGCGTGCGT	2100
GATCTTTTTG	ATCATGAAGG	GGTTCATTCT	GTTTGTTCCT	CCGCCGACAA	CACCCCGCAG	2160
CCCGGCGGTG	CCAAACGAAA	GAGTTTGCAA	AAAgcGcTCT	TCGAGCTCTG	CTATATTATT	2220
CTGTGCAACA	AGATCCCGTA	CCTGCTGTGC	AAAGAAAGGA	TCTGTTTCTT	CTTCAAGATA	2280
AAGACGAGCA	CGTTCGAACA	ATTGACTGGA	GTGCATGAGC	GCTTCCTCAC	CTTTAAAAGT	2340
ACTGGACTAT	TTACGGCACC	ACAGGATAGA	GGGGCATTGT	AATGGGAAGG	TGCTGCTCTG	2400
TGCAATGCTC	ACAAAAAGTG	CATGTCTTGA	AAAAGTGTA	CAGAGCCACT	ACACTGGTGC	2460
GCGTGGGTTT	TGCTGTTTCT	CCGAAAGTTT	TAAAAGGCTT	TCGCGATCTT	TTACCGGATG	2520
AAGAGATTGA	GCGTGCAATTG	CTCGTAGAAA	AACTGACGGT	GGCTTTAAGA	CAAATGGGTT	2580
TTGTACCTAT	CGATACCCCC	GCGTTGGAGT	ACACCGAGGT	TTTgcTGCGC	AAAAGTGAGG	2640
GTGACACAGA	GAAGCAGATG	TTTCGCTTTG	TTGATAAGGG	TGGAAGAGAT	GTGGCCCTCC	2700
GCTTTGATCT	TACGGtGcCg	CTTGCGCGGT	TCGTTGCAAC	GCACTATGCG	CGTTTGTATT	2760

TTCCCTTTTAA	GCGCTATCAT	TTTGCAAAAG	TGTGGAGGGG	CGAGAAGCCT	CAGATGGGTC	2820
GTTATAGAGA	ATTCACGCAG	gTGATTTTGA	TATCGTCGGT	TCGGATTCCG	TGTGTGCTGA	2880
CTTTGAAATT	CTAAAGTCGA	TACGGCACAT	GTTGTATATG	GCTGGTGCAG	AACACATACG	2940
TATTCACGTT	GCGCATCGTG	GCCTGTTTGA	TCGTTTTTTG	CGTGCTCTTT	CTTTGTCTGA	3000
CCAGGCTGAG	CATATCCTGC	GGATAATTGA	CAAACGTGCA	AAGATGGCGC	CGCATGTGTT	3060
GACAGCTCAA	CTTGAGTCGC	TTTGCGATCC	AGTTCGTGTG	CAAAAGATTA	TGACGTATGT	3120
AAGTGGGGG	GAGGTGGACG	GTGTTGCGCC	GTCGTTTGAA	CATACATTGT	CTGCCATTGA	3180
GACATTGACA	GGGGGTGTCT	CGGAAGAGAG	TACACGGcTT	AGAAAAATAT	ATGAGCTACT	3240
CTGTGCAGTG	AACATTcAGT	CCTCTTATGT	GTTTCGATCCA	TCTATCACGC	GTGGTTTTGA	3300
TTACTACACC	GGTATGGTGT	GTGAAACGTT	TTTAACACAG	TTGCCTCATA	TCGGTTCGGT	3360
GTGCTCAGGT	GGGCGCTATG	ACCATCTGAC	GGCTTTGTAC	ATGAAGGATG	CAGTGAGTGG	3420
GGTGGGTGCA	TCCATTGGGT	TGGATCGCTT	GTATGCAGCG	TTTCAGCAGT	TGGGAATGTC	3480
CCGAGAGCAC	GTTTGTTTTG	TGCAGGCGCT	TATCTTCTGT	CAGGATAGTG	CGCTCATGGA	3540
TGTGTACCAA	AAGCTGTGTT	CATACTTTGC	AGTGCAGGTG	GCGACGGAAG	TCTTCCCTGA	3600
TCCGCGGAAG	TTGAGCCAAC	AGTACGCCTT	TGCAGAGAAG	AAGGGGATTA	GGTGGGGGAT	3660
CTTTGTTGAA	CAGCGCAACG	CCGTGGTGGA	GGACTGCCTG	CTCGTACTGC	GCGACCTTTC	3720
TACGCGAAAG	GACACACGCC	TACCTGcGCA	CGAAcGgACC	GnCATGGgCA	GCTGAAGGGT	3780
AACAGGCGCC	CCCGCGACTC	TAGAGTCGCA	TGTTACTCAA	TTCAGTGACT	AGGTCCGTTA	3840
TGGAATCCTT	GTTCTTCTGT	CCGATTTcAG	TGATTGAGGA	AGCATACTTT	TTAACCTGTT	3900
CTGAGTTTTT	GTGCATGGAC	GACACGCTGC	TGTCGATTTc	AGACGTGATG	CGCGAAAGGG	3960
CTAGCATCGC	CTCCTCTACG	TGCTTGCTGT	TGTCCAAGAT	GGCGCCCGAA	TTTTCTCTGCA	4020
ACGTGCGCGT	GATCTCGGTG	ATGTGCTGTA	TAGCGTGCAA	CACGTGCACA	CTGTCTTTTCG	4080
TCTGTCTTAC	CATCGACTGG	CTGATCACTT	CTTCTTGGGC	CTTTATGTCT	GTGGTGATAG	4140
AGAAAATCAG	CGCAAACCTGA	GCCTGAACTG	CAAGCGCGCT	CTCAGAAACC	TTTTCAATTT	4200
CCGTTTTTAC	GTCCCGCAGC	ACTGCGGAGA	TATGCTTTCC	CTGTTTCGAA	GCGTCCTCTG	4260
CGAGCCTACG	TATCTCACTC	GCCACTACTT	CAAAACCCTG	ACCTGACTCT	TTACAGTACG	4320
TTGCTTCGAT	TGAAGCGTTC	ATTGCAAGCA	AGTTAGTTTG	ACTTGCGATG	TGCTGAATTA	4380
CCGCACCGGC	TTCAGCCAAC	GCTTCTGAAG	CGTGAAGCAC	TTCTCTTCCC	ACATCTGCAG	4440
ACTGAATAGT	TGCGTCCTGC	GCTAATTTTG	CCTCAAGCAG	CAGGGTTTCA	ATGACATTAC	4500

TATTGTCCGA	AAGTACCTGA	GTAACCTGACT	CGATGTTTCT	CACCATCTGC	TCTACGGAGG	4560
AGGCGGCATC	TGTTACCGTA	TCTACCTGCT	CGCCGATGTG	ACCGTTAAAC	CGATCGATGT	4620
TTCCGACAAT	GTGCTGCACG	TGCTTTTGTG	TTTCAAAAAT	GGTACGGGAT	TGGTGTTTAA	4680
TTTTGTCTTC	TGCCTTGTGT	GCTTGGGAAA	TGATCTCGTT	GATAGCGGCG	CAGGAAGTGC	4740
GCGCATTTCT	GACAAAATA	TTCGCGATTT	TCCGAGCGCG	TGCCATCTTT	CCACGGGATG	4800
CAATGAGAAA	GAAACGCGTG	CTCTTGTCGA	TCTTGTTCAA	ACTTTGGGTG	AGGAACCCAA	4860
ACTCATTTCT	ACGCACAACG	CGCATACTCG	CTGCGGACGC	ATCTCCGCTC	AACCTGTTTT	4920
GGATAAAGGT	GAGGATGCCT	TGTTTGTCTA	AATCGAGGTG	TCGGCCAATC	CTGATCATGA	4980
CGATTACGCT	GAGTACGCAG	ATTAAAGACG	CGCACGGGAG	GTTATGGGTT	ATAACCACAT	5040
GTGCGAGCTC	CTGCTCACCG	TGCAGAGGGA	GTAGGAGCGA	TGAAAAGCCC	ACGCAGAACA	5100
TACTAAACAA	ACCTGAAACG	AGCACGACGG	ATATTTCTCT	TGAGAGGGAG	TAGTACCCGA	5160
GGCGTGCTCT	GCGCAGGGGG	ATAAAGTGGG	CCCACTCCTG	CAGTGTGTAA	AAGAAAGGAT	5220
GGTGAAAGAA	GGGAATGAGG	CAGAGCGCTG	CGCCCACGCT	GCTGAGGTAG	TAGGACAGCA	5280
AGAGCACATG	GCTTGAGGAA	AAACCGACTT	CTAGGGCAGC	ACACACCGGA	TACACCACCG	5340
CAGCTACTGC	AGGAGGCAGG	GGAGAAATCC	ACGTGTACCG	CAGAAACGCA	GCCTCTGCAG	5400
CTGCGCTATC	GTTTTGATGT	TTCTTAACGG	ACATGAGGAG	AACGTAgTAG	AGCGTCAgcG	5460
AAGCACCCAG	CATGAGCGCC	AGcgCACAGA	AGAAGGAGAC	GCTGGTGAGC	AGAGCGgAGA	5520
GCATACTCCC	GTCTATGACG	CCTGCGATAT	AGGCTACGAG	AGAAGTCGCC	GGCACCCACG	5580
CAACGCTCAT	CACGACGGCG	CGCCGCAGCA	CGGCGAAGTC	GGAGACCGCA	TGTTcAGTGT	5640
TCATAGGTTA	CTCCATGGAA	AGGTGGACTA	CAGGCGCagc	TGGGTGAGCT	GGTTCGTAAG	5700
CATGTCCATT	GCATTCTTAT	TCTCTGAAGC	GATAATCTTG	ACGGAGGTGA	CCGCATCCAA	5760
GATACGAGAC	GTGCTGGCGG	CCATGTCGTG	CATAGCCACG	GTGATACCGC	CTGTGTTGTG	5820
TGCAAGTTTC	TTCATATCCT	TGAGGACCAG	CTCTCCATCC	TTGAGCATGA	GCGAGATACC	5880
GCCGCGGATA	CGTCTGCGGT	TGCCTGTAAT	AGCCTCCATG	GACCGCCTGA	TGTACTCACC	5940
CCCTGAAGAC	TGCTCCTCCA	TGGCATGCAT	GACGgTaGAT	TCCCGCTGTT	TAACCTTCTTC	6000
TGCAAGGACA	AAGAGATTGG	AAAAGTGCTT	GCTCAGGCTC	TCCGCctGcT	GCGCGATATG	6060
CTCTATCTTT	TCAGTGAGTT	GTACGAGGAC	TGAAGAAATG	ATCTTTCCCT	GTTTCGTTTGA	6120
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CTCCTCCGGT TACCAGGTGT GTGCCTACAC CCCAAGCATC GATGGGAGCA CCGCTTAAAA 19140
CTAAAGATTC GATGATCGTC TCATCCAGCT CATTTGAAAC TGCAATGCGT GCTTCGGGCA 19200
ATCCCGCTGC GTCTAGT 19217

(2) INFORMATION FOR SEQ ID NO: 20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3496 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

AAAGCATTG CAAAGACACG TACTGAGTTG GGACAGACAA TAGCAGCTGC TTACCTCGCA 60
TCAAAGGATG TGTTAACCGT GGGTATTGGA CTTGATATGT ATCAAACAAA TCAGTATTCA 120
GCTCTTTCTG AGCACATAGA AAAAATAGCG GGGGATAATA AGTTTGGAGC TCTACAAGCA 180
AAGGCAAGGC AAATTTTAGC ACGTCAAAAA AAAGAATCGT GAGGATGTGT TTTCTATAAA 240
AATCTGTGTA TTAACGTCAG TGGTGTGTCT GCTGTCTTGA ATTCTTTTTT GACGGTGAAT 300
ATGGAAGTAC TTCGTGTAAC CAGTTTAACG AAACATTATG GCTCCAGGCG CCATCCGGTA 360
CGTGGGTGTG AAGACGTAAC CTTTTGTGTT GAAAGGGGAC AGGTGTGCGG GATATTGGGG 420
TTGAACGGTG CAGGgAAAAG CACTGTACTc GCGTGATTGG TGGGTGATT CATCCGTCTT 480
CGGGGGAAGT GTATGCGTGT CATTGTTCTT TATCACGCTA CCCGGTAGGt ATCGGCGTCA 540

TATTGGTGT	CTGCATGAGC	AGAATCCGCT	ATACGCAGAT	ATGACGGTTG	AGCAACATAT	600
TCTTTTTGT	GCCCGCATAT	TTCAACTTGC	CGATGGGGAG	GCACGCACCG	CTGAAATGAT	660
AGAATTATTC	CAGTTGCAGT	CTGTTGCACA	CAGACGTGTG	CGCAATCTTT	CTAAAGGATA	720
TAAACAGAGG	GTTGGGcTTG	CGCAGGCATT	GGTACACCGT	CCCAAACCTCC	TTGTCTTAGA	780
TGAGCCTCTT	TCTGGTTTGG	ATATTGTATA	TCTGAAGGAA	TTCCATAAAG	AGATTGTTGC	840
GCAAAACAAT	AATCTTGCTG	TGGTGTTC	TACGCACGCG	GTGCAGGAGA	TCGAAGCGTT	900
GTGCGACGTG	TTTGTCTTAT	TGCATGCAGG	ACATGTTCTT	TTCTCAGGAA	ATAGAGCGCA	960
AATAGCAGCG	CGCATCGTGC	GAGAATTTCC	TGAGAAAAAG	CAAACAGTAG	CATTGCACCT	1020
TGAAACAGGA	ACCTTTATCG	CTTTTGATT	TGAGCAGTAT	ATGCAATGGC	AGAGTGCACA	1080
GGATGCTGCG	TGCTATGCAG	TGTAAACAAT	TTTTTACTTT	GTATAAAAAG	GAGCTGCGTT	1140
CTCTACTCAC	TTCAACGGTA	ACTTACGTGT	GTCACGTACT	ACTGCACCTT	GGTCTGACCA	1200
TACCGTTCAT	TGGAGTAAAT	TTTGGTTAA	ATGCGGGGAT	ATCTGAGCTT	CAAAGTTTTT	1260
TTCTTAATGC	ACCACTTCTT	TTCTGCATTA	TCATACCGCT	GCTGACAATG	CATGTATGGT	1320
CTCATGAGCG	AAAGTCAGGA	ACCGATACAC	TGCTTTTTTC	TTTTCCGATT	GCAGAACGAA	1380
CGATTGTTTT	GACAAAGTAT	CTATCgCTGC	TTTCAGTGTA	CGGTGGGATG	ATTGTTGTCA	1440
GTACTGCTAT	CCCTCTTTCT	ATTTTTTCTC	TGGGATATTT	TGATTATGCA	CCCTGTGCTC	1500
TTGCATACGT	GACGCTTGTT	CTTTTGGTG	CAGCTCTTCT	TTGCTGTCT	TGTGCGGTAG	1560
CCAGCTACGT	TTCTTACGCT	GCAGTGGGTT	TTGTTTTGAA	CTTTACGCTT	GCGGTGATGG	1620
CATTGCTGGT	GCATATTCCC	GCACGAGTGT	TCATATCACA	CAGATATATA	AGGGCATGTG	1680
TTTCGTGGGT	TTCTTTCGTA	TATCATTTTG	AATCTGCCGC	TCGTGGCATA	TTCGATTAA	1740
GCGATTTTCG	GTTCTATATT	TTGTAGCGA	TAGCGGGTAT	CGAGTTGCAG	TGTTTGATTG	1800
TAAGGGTTCG	TTTtagGTGA	GCAGAAAACA	TCATATACCC	TGTACCGTGA	TGATTCTGAA	1860
TATAATGATG	AGCGTGTTTG	TGACGTTCTG	TACACCTGTC	CGGTGTGATT	TAACAGCACA	1920
GAGAGCATAT	TCCCTTTTCG	CACACACCAT	TAAGCTTTTT	GAGAGTGTG	AAAGTACTGT	1980
GGAAATAACG	TGGTTTTATT	CCACCGATGT	AGATAGGTAC	ATTCCTACCG	TCATATATGT	2040
GAGAGATTTG	CTTAAAGAGT	ACGCTCATCA	GCTGAGTAAG	CAGTGTGCAG	TAGCGATGAA	2100
GGATATTAAT	CTCCTTTCTC	AGTCTTTGAG	GAAAGAACTT	GGATTTGTTG	CTCGGCGCGT	2160
TACGTATACG	CGTAACACTG	CCAGCATAGC	GTACGATGCG	TATTCTGCAA	TACTTGTTGA	2220
ATATCGTGGT	ATGGCTCGTG	CCGTACCCTT	TGTGTCTGAC	ACCAAAAGGC	TGGAGTATGA	2280

CATCGCGCGT TTGATCATCC AGATGCAGCA GGAAATGAGT GCAGATATGA TGTCCCGTGG	2340
GATATATGTT CTTGCTCCAC CAGAAAGTTT AAGTACCACA TATGCCCATG TATTACCGCG	2400
TTTGCAATCT GAAGGATtGC TCCCAGAGAT TCTCTCtATT TCTTTGCCTC AGCTAGATAC	2460
CCGTATTCCA CTTTTGaTTT TAGGTtCyGG CTACGTGGaT GAACACGcCG TAACCTTACT	2520
TGATGCTTTT TTGCAGAAGG GAGGAAACGC ATTGTGCTTT GTATCcAGGA AATAGCGTGC	2580
AACTCAATGA TCAATGGACT GTTGAGGAAA AGCGCCATGA TTTTCTTATT AATCTCCTGA	2640
GCACGTACGG AATTACTATT AACTCAGATC TCATTCTCGA CGAGCAAAGT TTTGCTGTAT	2700
CGTTACCTTC AGTTTACGAA ACTCAATACG ATAGAGTGTC TTATCCGTTC TGGCCAGTTG	2760
TTACTTTGAA ACCGTATACG CACGGAGTAC CTGTAATGGT ACAAGCGGGA ATTCAGTTCC	2820
TTCGATTATT TTGGCCCTCG TCAATACGAG TTTCTTTTCC TGCCCGTGTA TTTGAGTCTA	2880
CGAGTAATCA TTCTCTGTGT ATGACTGCGC CTTTTAATAT TGATCCTTCT GTTGATCACC	2940
TGAAAGATCT TGCAAAAGGT AAAATGCCCG CTCCCCAGGC ATTTGTTGCA TTTCGTGATT	3000
ACCCTGGAAA GCTCATGGTA GTGTCCGATG AGTACATGGT CAGTGCAATT GTGGAACATA	3060
CGCACAACGG AGAAAATCTT GATTTTCATGA TAAACTGTAT TCAGTGGCTG TGTGGTAACG	3120
ATGGTTTACT TATGCTGAAA AGCAAGAATC CCGCGTGGCT TCCATTGAAA TCTTTCCGTG	3180
ATGAACAAAA GTTCGCACGC ATTGTGCACC GTGCGCGCTA TCTGAATATC GTAGCTATCC	3240
CTGTGCTTAT AGGAATGCTG TTTGTGGTGA TGCAGATTCT TTATCGGAGA AAACGGTGAG	3300
GGTTATGCGA TCTGTGGATT CGCGTAGCAG CGTAACACGG TGGGTATGTT TAACCTCAGT	3360
GATTTTGTTT TGCTTTTGTA TTGCGGTGAT GAGGTATGGG GGAGTAAAA AGAGGCGTTA	3420
CTTTTATGGA TTTGTCTCC ACCCTAGAGA ACGGGCGGAT ATAACGGAAG TCATTCTCCG	3480
TTTTCCAAGG GAGGAA	3496

(2) INFORMATION FOR SEQ ID NO: 21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11628 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

GTTAATGTGG AAATGAATTC ATTTCCAAAA TTCTCCGCAG TGACGTATAT GACGTTTCAGG	60
TCTGTTGTCT TGTAATCTC GTGTCCAATA GCCTGCATAA GGTGGGTTTT TCCTAGTCCC	120

ACTCCACCGT AGATAAGTAA CGGATTGTAG GAAGTGCCTG GGTTTTTTGA TACGGAGATA 180
GCAGCGCTAT GGCTGAATTT GGTTCCTTCT CCGGATACAA AGTTCCTGAA GGTATAGTCT 240
CTGTTTCAAGT CGGGGTGAAA GCTCTTTTTG GAAGGAACCT CTGCAGGAGA GTTTTTCTCC 300
AGGTAGGTAT GCaCGTGTTC GGGGGGAGCA GTATTTCCAT GAGGGGTGCC TTTTTTAACG 360
GCAAACAAAA GTTTAATGGG GTGTCCAGAA AGTTCGAGGA ACTTGCCTC AAGCTTTTCT 420
TGATATTTTT GGCTAAACTG TATTCGAAA AAGTCTGAAG GTACTGCTAT TTCGATAGCG 480
TTTTTCAAAG ATGCGATAAA GAACAAATGA GCAAACCACA TGTTAAATTC TGCTTCGGTC 540
GATTCACCTC GTATCTGGCT GAGTGTCTCG TTCCAGAATA CTTCATACCC TACTGCGTCC 600
ATCTACCTAT GATACAACCT ATTGTATTTT GCCTGCAATA AACGAAGAGG TTATACGCGC 660
GTTGCTTTGT GGGTGTAGAT TATCTTGTTA TTCAAGAGAA GTTTTTATGC TACACTAAGC 720
GGCTCTTGTT TAGTGTGGG CTGTTGCGG ACAGTATACC GTGAGCATGC CCGCGAGAAA 780
TGGGGAGTCG GAGTGGTTAT GAGGTGTGAT GCTACGCAGG AAAAACGTGC GCACTCAGAA 840
TCAGGGGAGA GTGTTTTTTT CCAGAAGTTT TTGGAAACGC GGCAAATCTT CCTTTCAGGG 900
GAAATAAGTA AAGACCTCGC AGAGGGAATA GTACGGCAAC TCTTTGTATT GGAGTCTCTT 960
TCCGTTTCGA AGCCCATCTA TATGTACGTG GATTCTCCTG GGGGGGATGT GGATGCAGGG 1020
TACGCTATTT TTGACGTTAT TCGCTTCGTC AAGACGCCAG TGTACACAAT TGGAAATGGG 1080
TTGGTTGCGA GTGCTGGTGT ACTCGTTTTG CTCGCGGCAA AAAAGGATTG TAGGTTTGGA 1140
TTGCGCAATA GCCGGTACTT GATACACCAA CCCCTTTCTG GTATGCGTGG CGTTGCGACA 1200
GACATAGAAA TCCACGCACG GGAGCTTGAG AAAACGCGAT CGAAACTGAA CGCTTTGATC 1260
GCAAGTGAAA srrGTGTGAG CTTAGATAAA GTTGACAGG ATACAAATCG AGACTACTGG 1320
CTCGACGCTT CTCAAGCACT AGAATATGGT CTCATTTCTG ACCTGATTGA AAAAAGGGCG 1380
GACCTTCTTA AGAAATAATG GATACCGAAT CTGTCCTCTT TCGCGCGCAG TGCTTGGTG 1440
CAGTGGTGA TTTTTTCCTT GAACACCACT ACATAGAGCT CGATACGCCT GCACTCGCCC 1500
GTGCGCTCGT TCCAGAACGG TGTCTTGAGG TGTTTCAAAC CGAGTACTTT ACGTCagTGC 1560
ATGCTAAAGA TACACAGAAG TTATATCTCG TTCCCTCTCC TGAGGTTTTT CTGAAACCGC 1620
TCATCGCGCA ACTGCAACGT TCGGCTTTTC AGATCTCAA GTGCTATCGC AATGGAGAGT 1680
CCATGGGCGC CTGTCATAGG CCGGAATTTA CTATGGTCGA ATACTACACG GTGTACGCTG 1740
ACTACAAGAC GTCGCTCGAT GTAAGCAGCA AACTCTTTTC CTTTGTGGTT GAACAAGTAC 1800
AGAGTCATCC GCTCGCGGAC CCATATTCGT GTGCTTGTTT TTGTGCTCCC TTCGAGTACG 1860

TGACGGTCGA	GGAAGCTTTT	CTCCGCTATG	CAGGCTTTTC	CCTTTCGCAC	GCGAGTAGTG	1920
TACAGACGCT	TGCGCAGGAA	GTATTGCGCT	CCGGAATAGA	CCTGGGAGCA	CGTGCGGGGG	1980
TCGATTATAC	CCAGTGGTCA	TGGGACGATT	TGTACGAACT	GTTGCTCGTG	CATATTGTTG	2040
AACCAAAGTT	GAGGTCAATA	AAGGATCGTT	GCGTCGTGCT	GTATGACTAT	CCTATACAGA	2100
TATCTGCCT	GGCGCAnGAA	CACACTGGAC	GCTCAGGGAT	ACAATCTACG	TCACCTAACA	2160
AGGGTGACGC	ACCTCACTGG	GTGGTAAAGG	AACGGTGGGA	ACTGTACGTC	CGCGGTGTGG	2220
AACTCATAAA	CTGTTACACA	GAGCAGCGGG	ATGCGAAgcA	TGTTACCCGG	TACTGCAGGG	2280
AAGAACAAC	CGCAAAACAG	GGATCTGCGC	GAGTTGTGCA	TCCTGTTCCA	GAGGGCTTTG	2340
CGCACGCGTG	CgcACGCATG	CCCCCTTGCT	CTGGAGCAGC	ACTCGGATTT	GATCGCCTGG	2400
TTGCGCTGCT	AGCCGGTCGG	CACTCATTAG	ATGCGTTTGT	GTATGATCAG	TGACACTCCT	2460
CCTGCCTTGG	AGAAGTTAAT	TGGAAGTTTC	CTGGTTGTAT	TCGATGAGCG	TTCTCACGGG	2520
AAGATCCCCA	ATCAGCTCAT	GGTACCGTAG	aATGGTAAAC	CCACAACGGC	GAAGAAGCCC	2580
ACCAC TTCTG	CCCCGCCAGC	CCGGAGCATC	GTGCGCGCTG	CATTCAGCGT	TCCACCGGTG	2640
GCAATCAGGT	CGTCTGTTAA	CAGCACGCGG	GCCCCGCGA	CTACATCGCT	CTTGTGAACC	2700
TCAACGGTCG	CCTTTCATA	CTCTAAGGAA	TAGGAGCACG	AGTACGTATC	CCCCGGTAGT	2760
TTCCCCGCT	TCCGAATAA	AATAAGAGGT	ATTCCCATGC	GATCTGCAAA	AGGCGCGGCA	2820
AAAATAAAGC	CACGTGATTC	GATTGCTGCG	ACCGCGGTAA	CGTGCTCATC	GCGGTAGAAT	2880
TCCACCATTT	GATCAAGACA	GTAACGAAAT	ACAGCCGCGT	TCATCAGCAC	GCCAGTAATG	2940
TCGTAGTAGA	GAATTCCTTT	TTTAGGGAAA	TCAATCCGCT	TACGAATTGC	GCGGTCCAGC	3000
GCCGCGTGTC	CGTCCACAGG	GGCATGGTAA	CGTCCAATAC	CACGCACGTC	AATGATCTTA	3060
CCGGTTTGTT	GGGAGGCTTG	GTGGATTGAG	AATTACGTCT	CCTGGAAAAA	AGATTTCGCT	3120
GAACTTCAC	GAAATCTCGG	TGAAAATAAA	TGATTATTTT	ACCAATCGGT	GAAAAAAAGC	3180
CGGGAAAAGT	CCAAAAAGAC	AGTGGTTATG	CTCCATTTCT	TTGATTTTTT	TGTTGGCATG	3240
GTTTTTGCTT	TAAAGTTTGG	AGGAGAAAGA	ACGATGAACA	TGTGTACAGA	TGGAAAAAAA	3300
TACCACAGCA	CGCCACAGAG	CGCTGCAGTT	GGAGCCAGCG	CCCCCGGTGT	ACCGGACGCT	3360
CGTGCCATTG	CTGCTATCTG	CGAGCAATTG	CGCCACATGn	TAGCGGATCT	GGGAGTACTG	3420
TATATCAAGC	TACATAACTA	TCACTGGCAC	ATCTACGGCA	TTGAGTTTAA	ACAGGTGCAT	3480
GAGCTCCTTG	AAGAGTATTA	TGTATCAGTT	ACTGAAGCCT	TTGATACGAT	TGCCGAGCGG	3540
TTGTTACAGC	TGGGCGCGCA	GGCTCCTGCG	TCTATGGCTG	AATACCTTGC	GTTGAGTGGA	3600

ATTGCAGAAG AGACGGAGAA AGAGATCACT ATCGTCTCTG CkCTTGCGCG CGTAAAGCGG	3660
GATTTTGAAT ACCTAAGTAC GCGATTGAGC CAAACGCAAG TACTTGACAGC TGAAAGTGGG	3720
GATGCAGTGA CTGACGGCAT TATCACAGAC ATACTGAGGA CGTTGGGAAA GGCCATTTGG	3780
ATGCTTGGTG CTACCCTGAA AGCCTAGGTA GAGCAGGCTG TACGTACAAC ACACGTACGG	3840
CCATGCGCTG GAAGTCCTGT ATTTTGCACA TAAGGCCTCT CTCCCGTTAC AGCATGAGGG	3900
GAGGGAGGTG TTGGTTGAAG TGCTtGGGGA AGTGTGCATA ATCGTCcTAC GGAAGGGGGC	3960
GTTTTGTGGA AAAAATTGTT AACGCAGACG GATCGGATGC TATCTGTCCT GCGTCTGCGG	4020
CCTGTGCTAA GTCCATACGA TCTTACCAGG AGAGCTATTC TCTTGGTGAG GAAATCGCAA	4080
ATGCAGTCAC CCACGGTATC GGTGTCGGAC TATCCAwCtT GCACTGGTGC TCCTGGTGGT	4140
GCgTGCAGTG CACTAtACGC CGGCTGACTT GACGGCTCGC TATGTTGTTG GTTTTAGTGT	4200
CTTTGGCTCC TCACTCATTG TGCTGTACCT GTGCTCTACG CTGTACCATG CTCTGCCTCG	4260
TGGAGCGAag TATGTGTTG GTGTtATTGA TCACTGTTGT ATTTACGTGC TCATTGCAGG	4320
TACGTATACT GCGAGTTGCC TGA CTACTACCT GTACGGCGCG ATCGGATGGA CTGTTTTTGG	4380
GGTtATTTGG GGATTAGCGT GTAGTGGGAG CGTAATATAC TCCGTGTTTG GGCATCGGGT	4440
ACGGTGGCTG TCTCTCGTGA TGTATATAGC GATGGGGTGG CTGGTAGTGT TTGTAGCAAA	4500
GCCGTTGCGG GAACGGCTCC CTGAGATTAG CTTTCTGTTT TTGGTATtAG GAGGCGTGCT	4560
CTACACGGTT GGTGTGTAT TCTACGCACT CAAGAGAATA AAGTGGACGC ATACTATCTG	4620
GCATATGTTT GTCATCGGCG GTAGCGTCAT GCATTTTTTT TCGCTGTATT TAAGCTTTTA	4680
AATCCATAAG CCTCCTATGA TAGATAGGAG GTTCGTTTCT TTGCGCAGAC CGCATCCTGT	4740
CTGACGGAGC GaGCGAGTTC GCGCAGTCCT TTATGGTGAT GAAGACTGAA ACTGGTTCAA	4800
CCTCAACGCA TTGCATAACA CCGAGACTGA GCTTAACTC ATCGCTGCTG CTGCAAGCAT	4860
aGGTGTGAGA CGTAATCCGA AGAAGGGATA TCCGAGTCCT GCTGCTAGAG GAACGCCGAG	4920
CGTGTTGTAA AAAAATGCCC AAAATAAGTT CTGCTTCATG TTCCGCACCG TTGCAATGCT	4980
GAGATCTACC AACGTTACCA CGTCCCGTAT GCAGTTTCTC ATCAGGACTA CGTCTGCACT	5040
TTCTACTGCA ATATCAGAAC CTGCACCGAT GGCGATCCCA ACATCGGCGG ATGCCAGTGC	5100
AGGCGCGTCG TTTACGCCGT CTCTACCAT CGCTACCATC ATTCCGGACG CTTTTAAAGC	5160
GGAAATTTCT CGTTCCTTAT CATGAGGGAG TAACTCCGCT TTACTTTTCT TGACACCACA	5220
GCGTGACGCG ATGGTGTGTG CAACGTGTTT GACGTCTCCC GTTAGCATCA GCGTTTGGAT	5280
CCCACGCTTG TGCAAGGCAC CAATCGCTGC AGAAGAATGT ACCTTTACGG GATCTGAAAC	5340

AAAAAGAACT CCTACGAGAT TTTTATCCGC TGCTACAAAT AAGGGCGTTT CCTCTAGATT	5400
GTGTGATGGA GAGAGATATG TGTCCATGCC ATCAATACTG TGTGCGACCA TCATACGTGC	5460
ATTGCCTACC ATGACGGTCT TTGCATACGA GGTATGCACT AAGCGCGCCC GTAGACCGAG	5520
TCCTTGTTCT GAGTTGAAAT CGGTTATAGC AAGCGGTGTC ATTCTTTTAC GCTGTGCAGC	5580
TACGCTAATT GCAGCTGCAA GCGGATGGCC AGAGCATACT TCTAAGCTGT ACGcAAGGTG	5640
GAGTATGTCT TCTTCGTTAT AGGTTGGATG GAGCGTGTGT ATGTGTGAAA GTGTAGGACG	5700
TCCTAAGGTG AGGGTGCCAG TTTTATCGAA CGCTATTACT TTCGTGCGTG CCATTGCTG	5760
GAATACCTGC GCTGATTTTA TGAGAATACC CATCTGTGCA CCCTTACCCG TTGCAACCAT	5820
GAGCGCGGTA GGGACGGCAA GTCCTAACAC GCACGGGCAT GATATGACCA GGACAGTGAC	5880
TGCGATAGAA AAGGCAAATT CTGCAGACGC TCCTGCGCAT AACCACGCGC ACCAGaGAGC	5940
AAGGAGAGTG CTACGATTGA TGGTACGAAT ATGcGCTGAC AGCGTCGACT AGTTTGGTGA	6000
CCGGAACTTT AGACGCAGCA GTTTTTTCTA CCAATGAGAT AATTTGCGCA AGGGTGGTAT	6060
GCTCCCCTAC CCGTTCAGCA CGAAATTGA GGAACCCCGT GCTGACTAAG GACGCAGAAA	6120
TGACGGAATC TCCGCGTCCT TTTTCTACCG GaATACTTTC CCCGTGTaCG TTTGACTCAT	6180
CGAGCGTGGC CTGCCCCGAT GTGATGATCC CATCTACCGG AACTAGCTCA CCTGCTTTTA	6240
CAAGTACGGT GTCTCCGACA AGTACGTCCT GTGcAGGAAT TTCTATCTCA ATTTTCATGGG	6300
TCTCATGGGC TGATGcAGCG CTTGCAGTTG TTGGGGAAGA AGGGGATGCT CCGCGCGGAA	6360
CAGATACcTG ACGGATAACG CGAGCCGTTT TAGGTTTTAT GTCTAGCAGT TGTGTGAGTG	6420
CGCGAGAAGT GCGCCCTTTA GACAAGGCGG ACAGGTATTT ACCCACCCTG ACGAGCGTTA	6480
CGATCATTCG AGCTGATTCTG AAATACAAAT CCGCCACATA GTGCGATACA AGTGCCGTGT	6540
CGTTGGCATG CACGCCCATT GCTATACGCG CCGTGGCAAA GAGACCGTAT GTAAAAGAAC	6600
TCAGGGAACC GAGAGAGATG AGCGAATCCA TAGTTGCAGT GTTGCGTCTC AGAATTGCAC	6660
CATACAACGC AATAAGTCCT GCACGAAAAA GAGAGCGATT GCGGTACAGG ACAGGTAATG	6720
TCAGAAACGC CTGTACAAGG GCAAAGGAAA GCGCATATTT CAGGGGGTGC AAGAACCCAG	6780
GGATCGGTAG GTGCACCATG TGCCCCATGG ACAGATACAT AAGGGGCACG AGTAAGCAGA	6840
GAGAAGTACG GACACGCCTT TTGAGCGTCA CAAAATCTGG ATGTACCGGC TGGGTTCAG	6900
CAAGCGGTGC GgtTGTCGAA TGCCTATCTA AAAGCGTGGC TTTGAATCCT GCATGTGAAA	6960
CTGCATCGAT GATGGTCTGA GCAAACAGGG TGTGCTCAGT AGGGTGAAGA TCAGTGTGTA	7020
CGTATAAATG GCTGGTGGTG GGATTACGT AAACGTCTGTA TGCGCCTGTC ACGTGGCGCA	7080

CTGCTTCCTC	TATGCGCCGC	ACGCACGCAG	nanAgnATAT	ACCGTGAACA	ACAAATGACA	7140
CTTGCAATGAA	AGACTACCTC	CTATTCAGGA	CGGGTTTTTT	ATGTATCCAA	AAGCTCTGGG	7200
GAGGAGCGGC	TGGCAGTGAC	GGCAAGAAAC	TTGCATGTAC	CGGATAAAAA	ACCGTACACT	7260
TTTCATCCTA	TCTGCTGTGA	AATGGGAGCT	CAACGAATTA	TGACCCAAAA	ACTGCAAAAA	7320
ATAGTGCTGC	CTCCTGTCTA	TGGGCCTGCA	GATTTTGAAG	CGCGTGTCTA	CGCATGCTGG	7380
GAGCAGCGGC	AGGCATTTAG	CCCGCGTGCG	CGCGGgAGTG	GAACGTCCGA	TAGCGAGGGG	7440
TGCGATGGGC	ATAGCAGACA	GATAGAAGGG	GGTGCGCGTA	CCTTTGTCAT	TGCTATCCCA	7500
CCGCCAAATA	TAACGGGCGT	ACTCCATATG	GGGCACTGTC	TCAATACGGT	GTTGCAGGAT	7560
ATCGTTATCC	GCTACCAGCG	CATGGCCGGT	GCGTGTACGC	TCTGGATTCC	GGGAACTGAC	7620
CATGCAGGTA	TTGCCACGCA	GCATGTGGTT	GAACGCGCCT	TGAGGAAGGA	AGGCATCCAT	7680
AAGCGTGAGG	TGACGCGCGA	ACAATTCGTT	GCACGAACGC	AGCAGATAAA	GGATTCCCAT	7740
CAAGACACTA	TTGCGATGCA	GTTACGGAAG	ATGGGGGCAT	CTTGTGATTG	GACCTGTGAG	7800
CGCTTTACGC	TTGATGCAGG	TATGTCAGCC	TCCGTACGCG	AAGnTCGTT	ACGCTTTATG	7860
AACGTGGCTT	GCTCTATCGT	AGCATGTACT	TGGTTAACTG	GTGTCTTCGC	TGTGGCACCG	7920
CGCTGTCTGA	CGATGAGGTT	TTTCATCAAG	AAAAGGATGG	CGCGCTCTAT	TATGTTCCGT	7980
ACCCCTCTTT	ACCCCGTACT	GAAGAAGAAG	GAAACGGCGT	TCCCCCTCCA	TTAGGGACTG	8040
CTCAGGTGGG	GGAACTATC	ATCATTGCTA	CTACGCGCCC	TGAAACCATT	TTGGCAGATG	8100
TGGCAGTTGC	GGTGCAATCA	GATGATGCGC	GCTACCAATC	TTTGATTGGA	CGTAAGGTAT	8160
GCGTGCCAAT	GGTGAACCGC	ATTGTTCCCTA	TTATTGCTGA	TTTCATATGTT	GCGCAGGATT	8220
TTGGAACCGG	TATGGTAAAG	ATTACTCCTG	CGCACGATCC	GAACGACTGG	GATATTGGGA	8280
CGCGCCATTC	GCTTGAAGCG	ATTAATATGC	TCAATCCAGA	TGGCTCGCTC	AATGATCAGG	8340
TGCCTGCTGC	GTATCGGGGG	CTTTCGTGTG	CTCAGGCACG	GATACAAATC	GTTGCCGATT	8400
TGCAGGCGCA	TGGGCTCCTG	TCCCGTGAGG	AGCGCATAGT	GCATTCGGTG	GGAGTGTGTT	8460
ATCGCTGCGA	AGCAGTTATT	GAGCCGTATC	TTTCTCTGCA	GTGGTTTGTC	AAAATGAAAC	8520
CACTTGCTTC	TCAGGCCCTG	GCTGCGTGGA	AGCGTGCGGA	CGTGCACTTC	CATCCTAAGA	8580
AATGGGAAAA	TACCTATGTG	CGGTGGCTTG	AGCACATTCG	CGACTGGTGT	ATTTCGCGCC	8640
AGCTGTGGTG	GGGACATCGC	ATCCCGGTGT	GGTATTGCGC	ACAGTGTGCA	CAGCAAACGG	8700
TGAGTCGGGT	GGATGTGCAG	CGCTGTGCTC	ATTGCGGCAG	TGCGGATATA	ACGCAGGATC	8760
CTGACGTGTT	AGATACGTGG	TTTCCAGTT	GGCTGTGGCC	TTTTTCTACT	CTTGGGTGGC	8820

CTCAGGAAAC GCAGAArctG CGCGCGTTTT ACCCCACGTC TGCGGTCAAT ACCGCGTATG	8880
ACATTATTTTT CTTTTGGGTG GCGCGCATGA TAATGGCGGG GCTGGAGTTT ACGCAAACGG	8940
TTCTTTTTTCG AGATGTGTAC CTGcACGGTT TAGTGCGTGA CAAGCAGGGA AGAAAGATGA	9000
GCAAATCACT CAACAACGGG GTGGACCCGC TGCACATTAT TCGCACGTAC GGTGCCGAtG	9060
cAtGCGTTTT ACGCTTGCCt TTATGTGTGC gCAGGGGCAG GACGTGTTGA TAGAAATGGA	9120
TTCTGTTCAAG ATGGGTTCGC GGTTCGCGAA TAAGGTGTGG AATGCTTCTC GTTATATTTTT	9180
GGGCAATCTC GAAGGCAGGC GGGGTGACGC TATTGCGCAC GTGTCTCTAA CTGAACTGGA	9240
TCGCTGGATC TTTCACACAT TTAATGAAAC TGTGCAGCAG GTGCGTACAG CACTTGAAGC	9300
GTACCGTTTTT AATGATGCGG CACAGGCAGT GTATGAGTTC TTTTGGAACA GCTTTTGTGA	9360
TTGGTATGTA GAGGCAAGTA AATGCTCGTT TCAGAAACCT GATGAACAGG AGAAGGATCG	9420
CGCAgCTTcA GTGCTCTGTA CCCTTCTGGA AGAGACGCTG CGACTGCTCC ATCCTTTTTTT	9480
GCCGTTTGTA ACAGAAGAGA TTTACCGGTC cTGTCGCCTT CTGTGCACGA TACCACCCAA	9540
GCAATTCCGT CTGGGGCGCA CGCGTTGCTC ATGTGCGCGC CATATCCGGT GTATGTGCCG	9600
TCGCGGGTAG ATGCGCGCGC GTGTGCGCAT ATAGGTGCGG TGCAGGAAAT AGTGCGTGCG	9660
GTGCGnTACT GCGCGCTGCG TGTGGTATTG ATCCGCAAAA AGCTGTTTCA GTCAGAcTGC	9720
GTCCGAGTTC TCCGGCGCAG GATGCGAACG CCGCAGCGCA GGTGTCCTGT GTGCACGATC	9780
CGGGAGCGGT GCGCGGCACA TATGAGGAAT TGATTTGTGT GTTAGCGGGT ATTTCTCGC	9840
TTGTGTATCT TGAAAGCGAT GCGCCTAAAC CGCAGtTGCC GTTGCAACAG CGGGGACAGG	9900
GTTTGAGCTG TTCTTAGTAA CGACGGAAGG AATTGACCGG ACGATGCTGT GCGCGCTCT	9960
TCAAAAAGCG TGCGAGAAGG CGCGGCAAAA AGTGCAGCAG GTGGAGCGTA AgcTTGCAGA	10020
CGCGCagTTT TGCACGCACG CTCCTGAAGA AGTGGTGaCC GCAGAGCGCA AGAAACTGGC	10080
AGAGGCGCGC GCAACGTGCC ACACCCTTGC AGGATATCTT GCGGACATGA ATGGAAAGCC	10140
TGGACCGCTC TCTGACTCCG ATTAGGGTCC TGTGCCCTTG AGCAATCCGT TTAGCAGCAC	10200
GAACAGCCCA TATACCGCGC ACAGGAGCAC ACCGGCAGGg CGGGTGAGGG TCCTGCGGCC	10260
GAGTGCGCAC GCGTGAAAGA TTCCCACGAC TAACAGCATG GCAGGCAGGT GTAGCAGAGA	10320
AAAGATTTTTT GGCACCGGCA GGCCGTGTGG CGTAAGAGAC GCGGCAGCTC CGACTACAAA	10380
CAGCACATTG AGGATATCCG CACCTACTAT GTTTCCCACT GCCAgTGCGC CGTGTCCGCG	10440
GCGTACTGCG GTGATGGCAG AGACGAGTTC TGGCACGCTG GTGCCAAAGG CGATGATGGT	10500
TGCGGCTATG ATGCCTGCAG GTA CTCTGC GCGGAGCcmA TGATTTCTAC CGTGGGGATG	10560

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 CATACAcTGC GCGTATCAGT CTTGTCTGCG GGGAGCGCTG CTGTGCGGGT GTCTGGAGCG 10680
 TGTGGGAGGG CCGACCAGCG CAGAGAAACC CACAGGTACA GCGCGAGCAG ACTGAGAAAC 10740
 AGCCAGCCGA CGTACTGATG CACCCGCGCG CCAAAGCGTG GCAGGGTTAC CCATCCGAGC 10800
 GCGCATACGA CGAACAAATG CACCCGCGCG TGCCGGCGCA TCAAGTGTGT GTCGAGCGCG 10860
 AGCCCGGGGC GTGCAAGGAG TGCCCGAGT CCGAGAATGA AACC GG TATC CACCACGATG 10920
 GATCCTATGG CGTTTCCGAG TGCTAAGTCG GCCTTGCCsC AGAGCGCAGC GwATACAGAC 10980
 ACGGCTGCCt CGGGGGTGGT GGTGCCCAGG CTCACGAGCG TGGCGCCCAG GAGCGCTTCG 11040
 CTGATCCCCC AACGCCGGGA AAGCGCgCTG GCGCTCTCTA CCAAGCAGTC TGCCTGCGG 11100
 GCCAGAAAGT AGAGCGCACA GAGCAAGACG CCGAGTAAGG TGGGGAGTGT GCGCGcCGCA 11160
 AGTGCCTGTC GTACAAACGA TTCCATAtGC GTACTGGAAC GGTATCACAC TGGGGGGAGA 11220
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 CAGGTGGTGG TGCGCGGGGA ATTGCCCACA TTGGGGTGCT CAAGGCGCTT GAAGCGCTAC 11340
 AGGTTCCGCC GCCGCAATGT GTCGTAGGAT GTTCTATGGG TGmGsTGGT GGGGCGCTCT 11400
 ATGCGCTGGG GATGTCGGTG CGGGAGATGG AGGCGTTTTT TCAGCGTGAT TTTGTTATTT 11460
 CAGACTATGT GAATGCACGG GATCCCTCTG CGTGCGTTGA GGCGGGGAGT CnATnnGCCA 11520
 GCAAAAGGCC AGGAACCGTA AAAAGGTCGC GTTGCTGGCG TTTTTCATA GTCnGGCCCC 11580
 CTGACGAGCA TCACAAAAAT CGACGCTCAA GTCAGAGGTG GCGAAACC 11628

(2) INFORMATION FOR SEQ ID NO: 22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15518 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

ATCGTGGAGG CAGTGGATAA AATAATTCAG CCAGTTTTTT TGTCTGCACT TACCACCTTC 60
 GTTGGTTTTG TATCTTTTTG TTTTACCTCT GTTGTGCCTA TTTTGAGTT CGGCGTGTTC 120
 GCAAGCGTGG GCGTGGCGTC TGCGTTTGCA TGGCGCTCAT GCTTATCCCC TCGCTCCTCA 180
 TTATCCGTGG GCCTGAATCG CGTGTGTGTG CGCATGCTCC CGATGCCGGT CATGAACACA 240
 TGGATACGGC GATCACCGGT ACGCTGATGG TAATCGCCCA TCACTATCGG ACGGTGTTGT 300

TTGTTGCATT CCTTGCTGTT GTATTTTCCC TGGTGGGGAT GTCACGTTTG GTAATTGACA 360
ACGTGCTTAC GGAATACTTT GAGCCGGAGn TAACAGTGGT GCaGTCTGAT CGCTTTATGC 420
AGCAGCacTT CGGTGGTTCT CGATCGCTCA CCGTATTAGT GAGTACCCcT GCGCGGGATG 480
GCAGTGTAGC ACGTCCGGAT GTACTGAAGG CTATGGATGA TCTGACTGAG TTTTACAAA 540
CGCGGGTGA GCATGTGGGA AAGGTATT TTCTCGTCCC GCTTATCAAG CGCATTAACC 600
AAGTGTAACA CGCAGACgCG TCGGCGCGAG GCCTGGAGGC GCAGTCTGCA GATGTGGTGC 660
GCGGTGGTAC GGATGACTTT GGTGTTTTTA AAACATTAC GGGCGGACAT GAGGAACCTG 720
CGCGGGCGGA GACGTCACGT ACTTCCTTGG CGGCGCCGGG GTCATCGTAT GATTTTCGTC 780
AAGCAGTCGG TATGCTGGTA AGTGCCGTGC GGGATTCTGA TTTTGATCGT TCAGATGCGC 840
AgCAGCTcGT GCAGGCTCTT GAGAAGGCGG TGAACACGA TGGGCGCGCG TATTATGAGA 900
TACCGTGTGA TCCTAAGAAA TATGGGGTGA AAACGAGCGA GGAATTGCAG GAAATTATCA 960
GTGGGTATTT GTTACTGCTT tCAGGAAAAG GGTGGGTCT GGTGGATCGT GCCGTAGACC 1020
CCCGTGCGTT AAAGATGAAC ATCCAGCTCG GAACTAAGGG TCAGCAAGAC TCATACGGTG 1080
TCATTGAGGC AGTAAAAAG TTTATCCGGG AAAATTTTCC TCAAGACGTG CACGCTGAGT 1140
TTGGCGGCTC AGTATTGGTT GAGCAATCCT TGAATGATCT GGTGGTACAA TCTCAGCTGA 1200
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AGTGTGGTGG AAAAGATTTT CTGACACAAA CATTCTATGG TTCAGGGCGG GCAATTCTTT 1500
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CGCTCCTTCC TACCTTACTG AATGTGGTCA AACCAAGGTT CATCACACGA TAGAACCAA 1680
GGGAGGTATG CATGAAACGG ATAGCATATG TGCCGTTGTG CGCGGTAGTT GGTGGCATGT 1740
GTTTCGATGTG GGCACAGAGT GCAACAGATG TGATGGGTAG CTTTAAGAAA ACGGCGGAAA 1800
CAGGCACAAT GGGTACGCAA GCCCGCATGG TTGTCCGAA GGCGGGTAAG ACGGTGAGTA 1860
CCTTAGTACT TAAACAGTAT ACCCGGTATG AAAAGAGTGG AGAGCAAAAG ACTCTTATAG 1920
AGTTTTTGTC TCCGTTGAGC GTGAGGGGAA CACGCTTCTT ATCCCTGCAG AAAAAGGACG 1980
GGGCGTGGGA GCAGTACCTC TATTTGCCCA AACTCGCACG CGTCAGGAGC ATTACAGGGG 2040

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AGACGGTTGT GCTCGAGACG ATCGCCCAAC GCATACTACA ACCATTCACC TCACGAAGgT 2400
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TCGGTGAGTG TTGTGGCTTT TAGCGTGTG TTTCTTCGTG CGGTATGGCT CGGTGGCTGG 2520
CGGTCGAGCC CTTCTTGAGC GTCTCGAGCG TCGAGGCGCC ATCCTGCCGT ATTGCGTTTA 2580
GGAAGTCGAT GACGCTTGGG TAGCGCTGAA AAAACTCACC CCACTTTGTG AGGCGTTGCA 2640
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TGGTATGTGT ACCTCGGAAA GCACCACCTC TGAAATTGCG CAGTGGGGAA TTTCTTTTTC 2820
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CCTGCATGCC	CGCGCACGCT	CGCACGCCCA	TTGCCGTCGT	AGCGTGTAAG	GTGGATGTCC	5820
CGTGCAATCC	AGGTTTGGTC	GTGGTGATAG	AACTCAAGCG	TTTGAGCATG	CAGGCGCGTT	5880
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CGCTGACACA	GTGCAGACCC	TCCAACCTTT	CATGGTGGGG	GAGTACTTTG	GCTATTTTAC	6480
CGATGAGGGG	TCGGTTGTGT	TTGCCACGCG	GGTTACCCAG	CGCCTTTCTG	CTTCTACACA	6540
CGCATGGGCG	GTGTATCCTG	AGCATGCAGT	GCGCACGCCT	GTTTTTAACC	CTGCTGGGGA	6600
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CGAGGGGTGT	TCTCGCTTGC	AGATGTTGTA	ACTGCATTAA	CGGAAAAGTT	AATTCGACGT	11400
CACCCCCACG	TATTTGGGCA	AACAGAAGGA	TTTCTGGAC	CGGAAAATCC	GAAGCGAGCA	11460
CAAACAGCAC	AGGAGGTGTT	TGATCAGTGG	GAACGGATTA	AAACACAGGT	GGAGCGTCGC	11520
CGTGACGCTT	CTCCGTTAGA	GGGcATTCTT	CGAACGGTTC	CTCCCCTCAT	GcGCGCGTCC	11580
AAAATGCAAA	AAAACGCGTC	GCTGnCGCGT	CTTTTTTGTC	CAACACGCAC	GGAGGTGGTA	11640
CGAGAATGTG	CGCGTACCTT	TCGTGCACTC	CGTGCGATGT	CAGAGAAATC	TGCCGAACAA	11700
TCCGCCACTc	AAGCAGCGCA	TGTGTCAGTA	GGTGCGCTGT	TGACTGCAGT	GATATCGTTT	11760
GCACATCTTG	TGGGGGTAGA	TCCGGTGCTC	GCCCTTATCC	GCGCAAATGC	GGACTTCGTG	11820
CGCCGCTTTT	CGTGTGCCTG	TTCTAeACCT	GcCATTTCTG	GAGGTACTTC	TGTATTTTTG	11880
TCTCGCGCGT	GCCATAAACC	ACGTGCGCGA	CGCACGCGGG	CGTCTGCGGT	GCGCAGGCGC	11940
GCACGGTcAC	GGcGACTGTT	TTTTACTCGA	CACAAGCTGG	GGAATATGCT	ACGGTAGGAC	12000
GCGTCCCTGT	CTCCGTGTGT	AAATTGTTAG	CACGGGCAGG	GTGCGTGTTG	AAGAAGAGGG	12060
GGCTTATGAA	GACGTTGCAG	TGTGATATTT	GTCGGAAGGA	AGTGGACAAT	TCGCTGCCCCG	12120
AGAGGTTGTA	TTGGACATTC	CGGGAGTATG	ATGTGTGTGA	GGACTGTAAG	GAGTCTATTG	12180
AGGACAAGTT	GCGCCCTATC	ATACGTACTC	ACCAGCCTTA	TTCTCAGGGT	TGGTACGAGA	12240
ATCAGTTCAT	GGGTATGGTG	CAGCGCGGGG	TGTCTAACCG	TCGTCCGTAA	GTTTTTGATG	12300
TCAGTGTTC	GTGCTTGATG	TGTGArGTAG	GGACGTAnGG	GTGTGATCCT	TTTTTCTCGC	12360
GCGAGGTTGT	GGGCGAGGGA	TGGTGTGCTT	CGCGCTTATG	TTTCTTTCCT	TGGGCCkCGG	12420
CGCTGTGTTT	TTTGTGCGTC	CCgGTGTAcT	GGGAcGGTTC	CTCTGTGCTG	TTCGTGTGTG	12480

cAGGATCGGT	TGTACGCGCG	CGCACATGAC	TTTTTGGAAc	ACCCTGAGGA	TTTCTGTAGT	12540
CGCTGTGCCA	AGCCGCTTGT	TTCGGCGCGA	GCGTTGTGCG	TCTCTTGCCG	TGCGCTTCGA	12600
GAATCGGGTG	AAACGCCTGC	GCTTTGGCGT	GTCTTTTCAC	TTTtGCCgTA	CCTGGGTGTG	12660
GGGCGTCCTC	TTATGTCGTT	GTGGAAGACA	CAGCAGGAGC	GGAATTTTGA	TGCTCTTTTT	12720
TCCCGCATTG	CCGGGTGTTT	TTTGCCTACA	GCGCGTGAKC	GCTccTTCGT	CACTGCAAGT	12780
ACCGAGTTGG	TGCCAGTGCC	GCCgCGGCCA	TGCAAGATGG	CTGAGAGAGG	ATGGGACCAG	12840
GTTGAGGACG	TGTCGCGTCG	ACTAGAATTG	GCTGGTTTTA	CCGTTAATCG	TGCGTTGGTG	12900
CGAGTAGAGG	GTCGTTTCGC	GCAGAAAACA	TTGTGCGCGG	CTGCGCTGnT	TGAGAATCTT	12960
GCAGGGAGTA	TAGAGCTCGG	GGCGCACGCT	CGTGTGCCGC	GTGATGCCTT	GATTATCGAT	13020
GACGTATTAC	CACGTATGCC	ACGATGGACG	CGTGTGCGCT	GTGCTGCGCT	CCTCGGGCAG	13080
CGAGCGTGTG	CAGGGTTTCT	CGTTCTTTTT	TGCGTGAGGC	GTCAATTAGT	TAGCGAACTT	13140
CTTTTAGAAA	TTCCTGAAAA	TGCCGCAGgA	CGTACGGCCC	AGCAATTTTT	CTCTTATATG	13200
TTGTTTTTGC	AGCATAGGTC	TCTTAGGCAG	CACTCCGTgC	ACCGTGGTCT	TCGTGCGGTG	13260
CAGGTGTAGC	GTCCGTGGAG	TAAATCCAG	TGATGTGCAT	GCATGCGAAA	CTCACGCGGG	13320
GTGACCACAA	GCAAGTCGCG	TTCAACCGCG	CGTGGGGTTC	TTCCAGAGGA	AAGCCCGATG	13380
CGTGCGCGTG	TCCGCAGATA	TGCGTATCAA	CTGCGATTGT	GGGTATGCCA	AAACCCATGT	13440
TCAGGACTAC	GTTTGCCGTC	TTGTGACCGA	CCCCGGGTAG	ACTCTCTAGG	GCATGGGCGT	13500
CGCACGGTAC	TTGGGCAGCG	AAGCnTCGAT	GAGTTCAGCA	CTGAGTGCAA	TGATTGCGCG	13560
TGCTTTCGTG	GGGTATAAAT	TAATCGTCCG	TATGTAGGAG	CATAGCCGTT	CTTCCCCCAG	13620
CGCGAGCATT	GCTTGGGGGG	TGTCTGCCAC	ATCAAACAGA	GCAGCGGTCTG	CCTTGTGTGAC	13680
GCTTTTGTCT	GTTGCCTGCG	CAGAAAGCAG	TACTGCCACC	AGGAGCGTAA	AAGTATTGCG	13740
CCAGTGAAGT	TCTCCTTGTTG	GTTGCGGGTT	TGCTGCGTGC	AgcTGCTCAA	AAACGGCGTG	13800
TACCCCTTG	CTGTCTAATA	GACGCATAAG	GGTGCCAGTA	AAGAGAGGTA	GTTTAAAAAG	13860
TGCAAGAGGT	CATGGGGTGG	AAAGGAGGGA	AATGAACGCA	CAGGATTCAG	AGAGTTTCCT	13920
GAAGTACGAA	CTGCTGGACG	CACTCAAGCA	TATGCACCTC	GTGGTTCAGT	TTTCGGATAT	13980
TAAGCTTTTG	CGGTACACTG	ATAAGCAAGA	CGAGCTTAGG	AAAGCTTGTC	TCCGACTTGG	14040
AATGTTGAAA	ATTGGTTGAA	ATGACGATGA	TGGAATGCTT	GCGAAGAAGT	TCCATAACCT	14100
CGTTGACTTC	AGGTTTCATGA	TGGGAGAACT	GTATTTCTAG	GCGCTTATTC	TGGCGAGTGG	14160
GAAATACACA	CTTTTCAATT	TTATCCAAGC	CTGCAAGGGT	GATCAGTACG	AGGAGCACGA	14220

GCATCGCCCC TGCGCTGTAC AGCctGCGCC GATAACGAGA CCGATCCCTG CTGTCACCCA 14280
AATAGTAGTA GCAGTGGTTA AGCCTTTTCAC GTTTGCACCC ATTTTAAAGA TGGCACCGCC 14340
GCCGAGAAAT CCCATGCCGG AAACCACCTG TGCAGCGATG CGCCCGGGGT CGCCGATGTG 14400
GTCTCCGGTA ATCTCACTTA CGCAGAGGGA CAGGAGCATA ACGCCCGTAG CACCGACACA 14460
GATGAGTGTG TGAGTGC GCA ATCCCGCTGC CTGTAACTTT GAGGAGCGCT CCAACCCGAT 14520
AGCAAGTCCT GaGACAAAGC TGaGCAAGAG CCGGaCAACA ATAACGGaAT CTGTAATCAT 14580
GACTTTTCTC TTAGGGcGTA gcAGGaTGCA AGTGCCTCGA GGGAGACTTG AACTCCCACG 14640
CCGGTGAAGG CACTAGCACC TGAAGCTAGC GTGTCTGCCA ATTCCACCAT CGAGGCAAGA 14700
AAACCCTTCC ATGGTGGGAA ATATAGTTTT TCTAGTCAAG GGATTAGAGC AGCTTTCAGG 14760
GCACGGGATG CAAAGGCGGC GTACTTGACA AAATGCCAAT TCCAATACAC GCTGcCCGcG 14820
GCgCTGCGCg TGGCGCCGTG GGCTATTAGC TCAGCTGGTA GAGCAACGCC CTTTTAAGGC 14880
GTGGGTTCGAT GGTTCGAATC CATCATGGCT CAGAGGTGGG ATTGGTGCGC AACAAGGTGC 14940
GAGTTCTTGC GGTGGTCGCA GCGCTTGCGG CTGCGTGCGC GGTGGGCTTC TTTCTAGGAA 15000
GGTGGTTCGA CTTCTCTGCT AGGTCCCTCGG TGCTCGAAGC AGCTGATTCC CTCTCCGTTT 15060
CTTCTTCGGA AGCGGCCAGC TTTTCCACGG TTGTTGCAGA GGGGGACCCG TACACCGTCG 15120
ACGAGCGGCA GAACATCGCC GTTTACCGCA GTGCCAACGA GGCCGTTGTC AACATTACCA 15180
CTGAGATGGT AGGGGTAAAT TGGTTCCTAG AGCCCGTGCC TCTCGAAGGT GGCTCTGGGT 15240
CTGGCGCTAT CATTGACGCC CGCGGGTACG TGCTCACCAA TACGCACGTC ATCGAGGGTG 15300
CGTCTAAAT TTATCTCTCG CTACACGACG GCAGCCAGTA CAAGGCAACT GTCGTGGGTG 15360
TAGACAGGGA GAATGATCTT GCGGTGCTTA AGTTTGTTTC TCCTCCTGGA GCACGCTTGA 15420
CAGTTATCCG CTTCGGTTCT TCGCGCAACT TGGATGTCGG ACAAAGGTG CTTGCCATCG 15480
GGAATCCCTT TGGACTAGCG CGTACTCTTG ACCGTCGG 15518

(2) INFORMATION FOR SEQ ID NO: 23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6234 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

TTTGGAATTT TGTGTTGTG TTCACGGTAA ATAATTTGTA GCGTTCCGTG CCCGTTTTGA 60

AACGGTCCGG	GGCTGCGTCC	ACCAGGCAAG	GAGTGTATATG	AAAGCGACGC	TTACCTTTGT	120
CTTTATGCTC	CTTACGTCGC	TGCTGCAGGG	TCAGTCGCAA	CACATCACGC	GCTTTGCCGT	180
CATAGATGCG	CCCCGCATTT	ACTCAACCTT	TTGGCGCGAT	TCGCCGTTCC	TGCGCrATLA	240
TGAATCTAAA	AAAGCACGGC	ACCAGGGTGA	AATTCAGAAA	ATGTCTGATG	AGCTCGTAGA	300
nTCCGGGCAA	AAAAAAGTTG	ACGCGCAGAT	GCAGCAAAAC	ATCGCGTCAG	TCCAAAAGTA	360
CGAGGTGCTC	ATTGCGTCAA	AAACCGCGCT	CCTGTTGGAG	TATTCTAAAA	CGTCCAACGA	420
CGAGCTCACC	GCGCTGCGCA	AAACGCTCAT	CGCAGATGAC	GCATTCTATG	CAAAACTCTA	480
CGCCGCTATT	AGGCGAATTG	CAGAAAGTGA	AGGCTACAGC	ATCGTCTTAG	ATCTGCAAAA	540
AAACGCCGGA	ATACTCTGGT	ACAGCCACTC	GGTCGATATT	ACCGAAGACG	TCCTGCGGGA	600
GCTGAGCAGC	TCGTGATGCA	CCGTGAGCAC	CGCGTCTcCT	GCCTCCTACG	TGTTGGcCCA	660
GGAGCGTCCA	CGTGAGGTCC	CTCGCGTCAG	ATACCCCTCT	CATGCGTCAG	TACCACGCCA	720
TTCGGGCACA	GCATCCGGAT	GCGGTCTGT	TCTTTTCGCTT	GGGCGATTTC	TACGAAATGT	780
TCGATTCCGA	CGCGCTCCAC	GTGAGTACCC	TCTTGGGGCT	CACCCTTACA	AAACGAAATG	840
GAACACCCAT	GTGCGGGGTG	CCCGTCCATA	CCGCGCGCAC	GCACATAGCA	CGCCTGCTTA	900
AGCACGGTAA	AAAAGTTGCC	TTGTGCGAGC	AGGTTTCTCA	TCCTGTCCCC	GGAGAACTCA	960
CACAGCGCAA	GGTAATTGAG	ATTATCTCCC	CCGGGACCGC	AGTGGAAGAT	GACTTTCTCA	1020
GTCAGGGATT	TTCCCAATAC	TTAGCCACCG	TCTGTGCCTC	AGACGCCACC	GTCGCCTTTT	1080
CTTACCTAGA	AGTCAGCACC	GGCGCCTTCT	TCATCACCAG	CTTTCCCCGC	GCCGAAGCAG	1140
CGGACGCATT	GCAAAAAGAG	TTCGGACGTG	TCCAGCCGTC	TGAGGTTCTC	CTGTCTGCTT	1200
CAGTGCTCCG	TTCACTGCCT	GAACCTGCCG	CTATCCTCAG	TCTCTACCCC	CGGCTCGTTC	1260
GTACCACCGG	CGCAGATGCG	CTTTTAAATC	CCGAGCACAC	TAAAAACCGC	CTGCACCATT	1320
GCTTTCGCAC	ACGCAACTTG	GATTGCCTCA	CCCTCCTGCC	CCATTTCGCCA	GACCTCGCTG	1380
CCGCCGGGGC	GCTGATTGCG	TATTTGGAAG	AAACCACGCG	ACACCCGCTC	TCCCACGTCA	1440
GTGCCATCAC	CCGCTACCAT	ATCCATGACT	TTGTAGAAAT	CGAnTGaCgc	TACGCGCAAA	1500
AATCTAGAGA	TACTTCAAAA	TCTCCACGAC	AGCACCCATG	CGCATTCTCT	TTTGTAAACA	1560
CTCAACTATA	CACACACCGC	CATGGGTACC	AGGCTCCTGC	GCTATTGGCT	GCACCACCCC	1620
TTGCGCTCCC	AGGAGGAAAT	TCAAAAACGC	CTCAGTGCA	TGGTCTTTTT	TCATCACCGT	1680
CCCCACATCC	TCAAGAcTG	CGTGCAACAC	TCTCGTGTGT	TCGGGATGTG	GAGCGCCTAG	1740
TCGcCCGCGT	GGCGTTAGAA	AAGGCGCACG	GACGTGACTT	GCTCGCCTTA	AAAGAAAGTC	1800

TCAGGGCAAT CCTTACCTTC CGCAGCCTCG AGCGCGAAAG TCCCTTTCCC CCAGACCTTC	1860
TTCCCTCAGA AGGGGATACC CCGGTGCTGC AGGAACTGTA TGGTCTTTTA GAACAGTCTA	1920
TCAAAGAAGA TTGCCCCGTA ACGCTAAGCG ATGGGAACCT TATCAAGCGT GGTTTTTCTG	1980
CGTCCTTAGA TGAAGTGCAC CGCGTGCGTG ACAATGCAAA TGAAATTCTA AAACAATATT	2040
TGGCAGAGGA GCGTGAGCGC ACGGGTATCG GTACATTAAA AATGAAGTAC AATCGCATGC	2100
TCGGTCACTT TCTGGAGGTA TCCAAAGGGC ATCTTTCTGC TGTCCCTGCG CACTTTATTC	2160
GTCCCGTTC ACTGAGCAAT GCCGATCGCT TTACCACCGA ACAGTTGTCA GAATTGGAAG	2220
CAAAACTTGC CCGCGCCCGT GAGgGCcTCG TTTCCTTTGA ACAAGAACTC TTTGCAGATA	2280
TCCGCCGTAC CGTATGTTCT CATACCCAGC TGCTGCGCAC GAACGCTGCA CGGGTGGCAC	2340
AGCTGGATGT GCTCCAATCT TTTGCGCACG CTGCGyTCCA GCATGGCTGG AGTCAACCGG	2400
TCTTTATCAA AGACGGTGCA CTTCGTATTA CGGGGGGCAG ACATCCGGTG GTGGAACTTC	2460
ATCTCCCCTC CGGGGAGTTT GTACCCAATG ATCTGACACT TTCTTCAAGT GAACATGCGG	2520
TGTTGCCGCG CTTTGgsTCA TCACCGGACC GAATATGGCA GGAAAAAGTA CTTTTTTGCG	2580
TCAGAcTGCG CTCATTTGCC TGATTGCGCA GGTTGCTCC TTTGTCCCTG CAGAAAAGGC	2640
AGAGCTCACC CCCGTCGATC GTATTTTTTG TCGGGTAGGA GCGGCCGATA ACCTTGCGCG	2700
CGGGGAaTCT ACCTTCTTGG TAGAAATGAG TGAAACAGCA CACATCCTGC GTGCAGCAAC	2760
CCGCGACAGC CTTGTATCA TGGACGAAGT AGGACGGGA ACGGCAACTG AAGACGGTTT	2820
ATCCATAGCG CAGGCAGTCA GTGAATATTT GTTGCAATCAT GTGCGTGCAA AAACGCTGTT	2880
TGCAACACAT TACCATGAAC TGTCCCGTCT TGCCCACCCG CAGTTAGAAC ACCTCAAGCT	2940
TGATGTTCTA GAAACTGACA ATACCATTGT ATTTCTGAAA AAAGTGACGC CCGGTTCTTG	3000
CGGCAGTTCTG TACGGCATT TACGTTGCGCG TCTGGCGGGG CTCCCTGAAT CGGTACTGGC	3060
ACGCGCGTGT GAGCTTTTGA AACAACTGCA GCAGCGGGCA GGATCTGCTC CACGTGCGTn	3120
CTnTGCGCAC GAAGCAGATG CAGTGGCTCA AACAGAAGCA GTACACGCGC ACAAGGCAGC	3180
GTCTAAACCG TGCGCGCagc GTGTGTCGGC AGATCTATTT ACTCAAGAAG AGTTAATAGG	3240
CGCAGAGATT GCaTCGTTGA ATCCaGACGC CATTACACCG CTTGAAGCGC TGACACTCAT	3300
CGCGCGGTGG AAACGCAGCC TCCGCGGTTC TGCAACGCAG CAGAGCAGCG CCATGACAAA	3360
ACGGAAGGGG TAATGGTATG TTCCCCTGTT ACGCACGACG GGTATCGGGC ATGCGGCGCG	3420
CGGCGTTTTG TCCATTCTTT GCGCTAGAAA CAGAGCGAAC AATATTCTGC CTACCTGAGG	3480
AGAGAAAAAC GTGAATAAtT gCACTCCGTG cGTaCCTGAG TACGCGTGCT CCTGACCAGA	3540

TACATAGTGC	TTTTGTTGCG	TATTTGGCCA	ATCTTGATTT	AGTTGCGCAC	CAGTTTCCGC	3600
AGATTGCTTC	TGATATTGTG	CAGGAGCTGA	TAGATCAGCG	GTCGTATGTA	AAGTTAATCG	3660
CAAGTGAGAA	TTACAGCTCT	CTTGCGGTGC	AAGCGGCGAT	GGCTAACTTG	TTGACTGATA	3720
AATACGCAGA	AGGGTTCCCC	CATCATCGCT	ACTATGGCGG	GTGTCAGAAT	GTTGATTCTA	3780
TTGAGTCTGC	CGCCGCTGCA	GAAGCATGCG	CGCTCTTTGG	TGCTGAGCAC	GCATATGTCC	3840
AGCCGCACTC	CGGTGCAGAT	GCGAATCTTG	TTGCATTCTG	GGCTATCCTT	TCGCGGCAAA	3900
TTGAAATGCC	AACCCTTTCT	TCTCTTGGTG	TCACCGCCgC	TACGCATCTG	AGTGAGGAAC	3960
AGTGGGAAGT	ACTGCGCCAG	AAAATGGGTA	ATCAAAAAC	TATGGGGTTA	GATTATTTTT	4020
CAGGCGGTCA	CCTGACCCAC	GGGTACCGCC	AAAATGTTTC	AGGACGAATG	TTTCGTGTGG	4080
TGTCCTACGC	GGTGGACCGA	GACACAGGAC	TGCTCGATTA	CGCTGCAATC	GAGGCACAGG	4140
CAAAGCGGGA	AAGACCACTT	ATTTTACTTG	CCGGATACAG	CGCGTATCCT	CGTTCCATTA	4200
ATTTCCGCAT	CTTTCGGGAA	ATTGCAGACA	AAGTGGGCGC	AGTACTCATG	GCTGATATGG	4260
CTCACTTTGC	TGGACTGGTT	GCAGGCGGTG	TTTTTACGGG	AGACGAGGAT	CCAGTGCGCT	4320
GGTCTCATAT	CGTGACCAGT	ACCACACACA	AAACGTTGCG	CGGGCCACGC	GGTGCCTTTA	4380
TTTTGTGTAA	AAAAGAATTT	GCAGAGGCGG	TGGATAAGGG	CTGTCCGCTT	GTGCTCGGCG	4440
GCCCGCTGCC	ACATGTGATG	GCAGCAAAGG	CGGTTGCGTT	TCGTGAAGCT	CGAAATGCTG	4500
CTTTTAAAC	CTATGCGCAC	GCAgTCCGTG	ATAATGCGCG	TGCGCTGGCA	GATGCCTGCA	4560
TACAACAGGG	GATGCAGCTG	CAGACAGGGG	GGACGGATAA	CCATCTGCTA	TTGCTtGACG	4620
TGCGTCCGTT	TGGACTGACA	GgTCGTCAGG	CAGAgCGCGC	GCTGATAGAC	TGCGGAGTGA	4680
CGCTCAACCG	TAACTCGCTC	CCCTTTGACC	CAAACGGCGC	ATGGCTCACC	AGCGGACTGC	4740
GCATCGGAAC	CCCCGCGGTA	ACGAGCCTTG	GAATGGGGCC	TGAGGAAATG	AAAAGAATAG	4800
CGCGCCTGAT	CGCGCGCGTG	CTCGGCGCTG	CAACGCCTGT	GCGGACAAAG	ACAGGTGCGC	4860
TAAGCAAATC	GGCGGCCGAG	GTGCCCCGCG	AGGTTAGAAG	CTCAGTCTGC	TCGGAAGTGC	4920
GGGAGCTGCT	CGCACGCTTC	ACGTGTGTACC	CTGAACTCGA	CGAACCCTTC	TTGCGCGCAC	4980
ACTTTACGCG	TCGCCCTGCn	GGACAAAACA	CCTGCCGACG	AAGGgACTTG	AACCCTTaCG	5040
GGGTTACCCC	AACAGATTTT	GAGTCTGTCTG	TGTCTGCCAG	TTTCACCACG	TCGGCCCCGCG	5100
CGCAgCCTAT	CACACGAGGA	ACAAAAGgTA	CAGCTGTTCA	TGTAGTCTTC	TTGCGTGAGG	5160
CCCCGTGTCT	CCCATTGAGG	GAGCCGTTAT	TTTTCTCCCA	TGAGGAGTTT	TAGTTCCTCGA	5220
ATATCTGCCA	CCAGTTTAGA	GCGATCTAAA	TGCTGATAAC	GCGCAGGGAG	CATTTCTTTT	5280

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CCTGTGCATT CGAGTACTGC CACTAAATTT TGCAGTTCAA TTTCGTGCGG ATAAGCAGGA      5340
GGGATAAAGT CTTCAATGGT GCGGGTGATG TCCTGTGTGG TTACCATCGT GCGATTTTTC      5400
ATCGCAGCAG TTAGCTGGGC GCGTACTAAA ATGGCTTCTA AGTCCGAACC GGAAACAGCG      5460
AATTTTATTC TGCGAATGAT TGCCGGTACG TGTACATCTT TGAGCTTGAT ACGTAATTTT      5520
TTTTTGAGTG CTTCAAAAAT TTCCGTTTTT TCTTTTGTGG TTTCAGGGTA GAAGAGCGCA      5580
AGATGCTCTT CTGCGCGTCC CTGTCGTTTC AGATCTATTG GTAGCAAGTC TGGGCGCGAA      5640
GTAATCAGGA ACCAAATAAT ATTGCCCCGG TGTGGGTGT TACCCATAAA CCCTGCAATT      5700
TGTGCAAAAA TACGCGATTC ACCTGCCGGC GCGTTACGCC TACCAAACAC CGCATCAGCT      5760
TCGTCCACCA TCACCCTAC CGGGTAAGC GCTTTGAGGA TGTGAGCGT TTTTCTAGG      5820
TTCGACTGTG TAATGCCAGG CTGCGTTGCC TGGAAATTAC ACAAACGCAC CATGGGAATC      5880
CCAATTTCCC CCGCAAATGC GGAAACCATA AATGATTTGC CTGTCCCAAT CGGCCCTGAG      5940
ATAAGGTATC CCATTGGCAA CACATCTGCT CTTCTTGCT TAATGGCGCG CACTGcGTTA      6000
TACAATCTCT TTTTACAAA GACATTTCTT GcAACGTATG AAAGGTCGCA GGATGTGTCTG      6060
ACAAATTCCA ACAAACCGCC TGCTTCGTGC TCAATAATTT CCTGTTTCTT CCTTTTAGAA      6120
ATGTAAGGTT GCAGAGTCCG TATGGGAAAG TCTACTGATA WTGwcCTctG GCTcCCATTG      6180
CATCGATCGT TGGnACGTCT CTGCCGAAG CTGGTGGAGG GTCACTAAAT TCAA      6234

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(2) INFORMATION FOR SEQ ID NO: 24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1548 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

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CGGATAAAGG ACGACTGGGC TGGCAGCGGG TGTGGGTTCC CACCTCCTGT TCGTGTCTTT      60
TCAGGGTGTG TGC GCGTTCC GAGAAGAGGG CGTTTTGTGT GTGGGGAGGA GTACGATGGA      120
TACGCATATA TGAGGCGCCG GGTGTGCACG GTGGTGCGCG CGGTGGTGTG TCTACTCAGC      180
ACGAGTTTGC TGACCACGTG CGATTTCACT GGCATCTTTG CGGCAATTCA GTCGGAAGTG      240
CCCATTAAAA CGCCGTCCAT CCCGGGGGCG ATTTATGGCC TGGTCAAGGC CGGGAGCAAG      300
CTCTACGCCA CCAACGGCCG GCTTTGGGAA AAGGAGCTGA ACGGCACTGG GTCgTGGCAG      360
AAAnTGCTTT CCTCGTCCGT TCCCACTGAC TCGGATAAAA AgGTTATGAR CaTTGCCACC      420

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GACGGGgACA CGTTCGTCTT CGCCTGCGTG CCTGGCACGG GCGTTTACAA AACTGCGTA	480
AATGGCGCGG GCAGCTCAAG CACCGGCACA ACGGCAAGCC CCTCGACTGA AACCTGCTCG	540
CAGCATGCGA CGCTCGTGGG GGGAACTGCC AAGCCCTTCT GGCTCGTGCC GGGAGGCgnG	600
nGAAATAATG GGAAGTGGG TTGCGGGGGA GGGGGGGTG GCTCCTCCTC GAGTAGCAGC	660
TCGTGCATTG ACATCTGGCT CGTGCCGGGA GGCnGnGnGa AATAATGGGA ACTGCGGTTG	720
CgGGGGAGGG GGGGGTGGCT CCTCCTCGAG TAGCAGCTCG TGCATTACA TTAAGGTAGA	780
AAACACGGAC GAACAGTTTC TCGATATGGG TGAGGGGTAC GTGGTGACCA CCAAGCACCT	840
CTACACCAA AACGGCTCGT CCAGCGCGGG ACCGGCGCAG TGTCCCGGTG GCGGTGGCGG	900
CGGAGGCAGC AGCGGGGGTG GGGGTTCTTC GGAGTACACC AAAGCTTCCT GTTCTTTTC	960
CACGCCCAT CTGGCAAGCG TCACAACGGG TGCTATCACT ACATTCTCAC CAAAGAAAAA	1020
GTGTACTGCA GAAAGCAGGA CACCGCTTCC TCCGCTGCGT CGTCACCAGC CCAGTGTCCT	1080
TCTTCCCCTT CTCTCTCTTC CTCTCTCTCG ACGAATGCGG GATGCGAGGT GCGCACGGG	1140
GTGGACGACC CGCTGTGTCT TGCGATTTTT AAACACAACG GCTGCGAATA CTTGCTCATC	1200
GGCGGCAGTC GGGGCTACGG GGAAATAAAG CTGGAAGCGA ACTCCAGCGG TACGAACGGC	1260
ACCTGCATGC GATTGAAAGA GAGCAATGTG CACAAGAGTC CGGGCCAGTG GGGCGAGTCG	1320
AGCCCCACGC CCAAAGCGAG CGCCGAGCAG TATCGGGGCA CGGTCCGTCG GTTTGCCGTG	1380
CAGAAAATCT ACGTAgtTGA AAAAAATGGC GGTGGGAACG GTGTGCGCCG GGGTGGGGCG	1440
GGCTGTCTTG CAAACGCCAG CAGTTCCAGC GGAGGGACCA GCAGCACGCA GCGTCCAGAC	1500
CTCTACGCCG CAGTGGGGGA GTCGAGCGAC ACCTAnCAG GGGGGTTT	1548

(2) INFORMATION FOR SEQ ID NO: 25:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3172 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

TACGAAGAAT CGTACTGCCC ATCCCCATCC CgATCAAAAT TCCCGTCAAC ATTGTTGATA	60
AAGTACTGTT CCTTAAAAAA ATCGAGTCCT GTCTTTCCAT TCAGCCCCAT TGCCTTACGG	120
TGTACGTTAT TTACCAGATC TACAAAGTTC ATAGCCATAG TATCGAGCTT GCGCAsTTCA	180
TCGCGCACGT CTGTGTCACG CATCTATCA ACGCTGCAAG CTTACCCCCA GAAAAGTGCG	240

CACGATCCCC	TGAGTCCTTC	CACACCACGG	ACACATATCC	TTCAGGCGTT	GTTCCACTGA	300
CAAGCCCAAG	TGTCTTATAA	CTCTTCCCCT	GcACAAC TTC	TAATCCCGCA	CTGTGAATAA	360
CGTAGGACTC	ATCCTCATCA	CGCACGTCCA	CCCTGACCTC	AATGCGGTGC	GCGAGACTTT	420
CCACCAACGT	ATCACGTCGA	TCTAAAAGAT	CATTAGGATT	ATCACCCATC	GCTTTTGA CT	480
TCACAATCTG	TTCATTTAAT	TGAGCAATTT	TGGCAAGGAG	ATCATTCACC	TGCTCAACCG	540
TTGCCTCAAT	ATCCGCGTTG	AGCATATCGC	GAATACCGAC	AAGACCTCTA	TACTGATGAT	600
GAATGGCATC	CGTTAGCGTC	TGTGCACGCG	TGAGCACAAC	CTGACGCGCT	GCACGGGCTT	660
CAGGATACAC	AGACAGTTCC	TGCCAGCCAT	CCCAAACTG	GTCCAGCCTG	GTACGAACTG	720
CAATATCCTC	CGGCTCATTA	TACACCTGCT	CTAAAAGACG	CACATACGCA	TCACGCGTGC	780
TCCAATAmCC	CTGTTCTGCT	GTCTGAGACA	CAATGCGACT	ATCGAGGAGC	TGGTCAcGCA	840
AACGCGCGAT	AGAACCGATG	GTGAcCCCTT	GTCTATCTG	ACCAGGCAGC	TGAGCGCGAG	900
AAAGATCAGG	ACGGTACAGC	GGCTCGAACG	AATCGAGGTT	TACTCGCTGG	CGGCTATACC	960
CCGGCGTGGA	AGAAaTTCGAC	ACGTTGTGTC	CTGCAGTCTG	TACAGATTGC	TTATGCGCGT	1020
AAAGAGCACG	CTTTCCAAGT	TCTATAGATG	CAAATGTCGA	CATGTGTTCT	CCCTATAAGA	1080
ATGGAGGGTA	CGCGCagCAG	CCCCATCAGG	AACCTCCCTC	TCGCCCTGTG	GATACTCGCG	1140
CTCTGCTCCT	CCCCCGAGGT	ACCGCACCTT	ACAGCACACG	ATCAAAGACA	AGACTTCCAG	1200
GCGCACAACG	GACTGGACAT	CCGTCTTCG	TATAGGAGCT	GCCCTGCTGT	TCACACGTAA	1260
GGGCGCTGAC	AAGCGcGTGT	GCCAGACCAC	GCGCGTGAGT	CAGATAGTGT	TGGATTGCAT	1320
CGTGCTCATT	TTTTGAAGAG	GCAACTTTgc	tACGCAGCGT	CCTATAGAGA	GCGACGACCG	1380
CATCGTGAC	ATTGACATCC	GCGCGCCTCA	AATAGGCAAA	GAAGGAATCA	AAGTCAACCG	1440
GCGCGTCACC	GTACGGCCGA	ACCTCTTGGA	GAAgTAAGAA	ACACCGTTTA	TCGAGATGCA	1500
AGAACTCACG	ACTCaGCGCC	TGTGCACGGC	TGAcAAAGGA	TTCTACATGC	TCCCacGCAC	1560
GTGTGCGcAG	CGACTCGTAC	ACACTACGCT	GGACCTGTAT	CACCTGGCCA	ACAAGCTCAA	1620
TCTGCGCAAC	AAGAATTGCC	TCCACCTGCC	CTGCCCCGGTG	CAAAGCCCCG	TCTCGGTCCA	1680
TCGCCCCTC	CTCTAGCCAG	GAGTCTCGGC	ACCTTTCCCG	AGCGCTTTAC	TTTTTAGTGA	1740
AATAAAAAAC	CGTCCAGTGG	TCTGCAGcTC	CGCAGGCTAC	TGGACGGCTC	GCACCTGCTG	1800
GCTCTAtGCG	CGGCCGGCGC	TTCCGAGCAC	TTCTTGTTT	TTGTGCATGT	ACAACTTCTT	1860
AAGCTCATCG	CGCGCAGGAC	CCAAATACTT	TCTCGGATCA	AACTCATCTA	CCTTGGTGGT	1920
CAGCACCTGC	GTATAGCTGC	AGTCATAGCG	AGGCGACCGT	CCGAGTCAAT	GTTCACCTTG	1980

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CACACCGCGC TTTTGGCAGC TTTCCGCAAC TGCTCTTCTG GATACCCACA GAATCCGGCA      2040
GATTTCCACC GTACCTTTCA ACCTCCCGTA CGTACTCAAC GGGCACAGAC GAAGCACCGT      2100
GCAGCACGAT GGGAAAGCCA GGAATACGCT TTTCTATCTC TCGGAGGATG TCAAAACGTA      2160
GCGGAGGGGG GATCAACACT CCATCAGCAT TGC GCGTACA CTGCTCTGGC GTAAACTTTG      2220
CTCTCCCGTG ACTTGTTCCT ATGGAGATGG CaAGGGAATC CACCCCGTT TTTTTCACAA      2280
AGTCCTCAAT TCGTCAGGCA TAGTGTAGTG GCTCTTCTCT GCCACTACAT CGTCTTCCAC      2340
ACCAGcGAGT ACCCCAAGCT CCCCTTCCAC GGTGACATAG TCCGCACGCG CATGGGCATA      2400
CTCGCACACC TTCCTGCTTA GCGCTACATT CTCGTCGTAC GGCAACGCCG AACCGTCAAT      2460
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GCGTGCCATA TTGCGCAGGA GCGTCGCATT TGCCTACTTG CGCGCACCGG AAGAAACCTG      2640
CAGAAAGACG GGAGAACGCG TTTCAACACA CGCCTGTATG ATTGCCTGGA GCTGTTCCAG      2700
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CTTGGTATTC ACCAAACCGA GTGCCTTGTA ACTAGTCATG AGAACCCCTT TTGTTAGGAT      2820
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GGGCGATCGG GACGCTCTAG TCAACCGAAG CGCGAAGGCT TGAGTCCACA CGTCAGGCGT      2940
TGGAACGGCA GCAAGACGAT TTGGACAGGT ACCACGCGGG AGGTTTGACA AGCTATTTCT      3000
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TTGCGAATGA AACAGGGCTG TTTTATGGTG GCGGGCTTTG CGCTGACGTG CGCGTPTTTG      3120
GTGTCCCCC TTGCGGCGCA AAGGTCAAG GTCAATTACC AGGCATACTT CA      3172

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(2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24699 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

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CGTTTTTTTA ATGGGGTAGC CAAGCCAGCA TCCACCATTT TCTGCATAAT GGTGTCGTAC      60
TCTTTTTTCG AACCGTCGCA GACGTAGACG GTATCTGGGG CACAGAGTGC GACCATCTCT      120
TCTATCCACG CCTTTGCTCG AGCGTGGGCA ATCTCGTGAA GTTCCATAAC GCCGCTCCTT      180

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GGTGCGTAGC	GTGCTGCACG	GGTATTCCAG	GCACGTATCG	CCCCAGAAGT	AkAGCGCGsw	240
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GAGCGGTGTT	CTTTACCTAG	GnCGTTTCAC	TCTCTGTCTA	TTACCTGTCA	GTTGTTTTTC	360
TCAAAAAGTG	ATGACGTGTG	CCGATACCGT	CAGGGGTGCG	CAAGAGGTTT	TTATGCTATG	420
TATCTACGTT	GAGCTTCCCT	ATTACTATCA	AcTGACGCGC	ATCTTCCCTG	CTGACATCGA	480
ATCGCTATGT	GCGCGTATGA	GAAGGTTCGC	TGTCCACAAC	GGTGCTGCCC	TCCACGAGGC	540
ATCGTCCGTT	CGTATCTTTG	CATTTGAAGC	ACACAGTCTC	GGTTCTGTAT	ACGcCGCGGT	600
ACGCTGCGTG	CGTGCGCTGT	ATCAAACACT	GGACACATAC	GAAAAGCAGG	TGAAGGAATT	660
TCGTATCCTC	ATGGACGTTG	TTGCTGACGA	TGCTTCTCCC	TGTCTGATAG	AAGATCGCTT	720
CCATGCATAC	CGCAGTACGC	TGATTCCFGA	CCGTGGTTTT	TTTGCATCCT	TTCGTGCAAA	780
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TCTGCGCGCT	GCGGTGTCTT	TTTTTAAAG	ACGGCGGTAT	GATTCGTCTT	TTCCCCAATA	1080
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GCCAAATGcG	GCGCCGCCGC	CCATTTATGT	AGACCCTTGT	GCTGGACATG	AGAGCCAAAA	1200
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GCACAACGCG	TATGCCATTC	CAGAGGATGT	ACACGACAGT	CTAGAAAAGC	GTGTGCGCGT	1500
GAAAATGCCT	GTAATACGCG	AATGTATTTm	wwcCCTTCCT	TTGGAAGAAA	TATCAGGAAG	1560
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CATCCGATTG	TGTGTTACAC	AGCTTGTTTC	ATACGTATTC	TGACGTGCAG	ATTGCGCACC	1680
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CGCTGCTGGT	GGGCATGCGT	GAAGACGCAG	AGGCCGCGTT	CAGAGAAGCA	AAGGCTTGTC	1800
TGACAACACT	GCAGGCGCGG	CGTTTTGTGT	CCGCTGAATA	CCGGACCTTT	TCCCTCTTAG	1860
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GTATTACCTA CTTTTTGCAG CATAACTTTA CCCAGGCGCG GCTTTTTCTG AGTAAGCTAT	2040
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GGGCTTTGAC TTTGAAcTTA CGCACAAAAA TCTCTTTGTG TACCGCGCGG GTTCATACGG 23700
CAACGGGcTG CCGCACCCgT ACACGAGCAG GGAGCAGTGG GCTAGTTCCC CTGGGCTGGC 23760
AGAATCGTTT CGCCTCAAGT ATTCGCGCTT TGAGTCCccc ATCGGCGCGC ACACCGGGTA 23820
CCAGTGGTAT CCGCGCTATG CGGTCATTAG GGTGAACGGG GGGGTGGACT TTCGGGTTGT 23880
AAAGAATTTT TACGATAAGG ATAACAATCA GCCCTTCGAC CTGACCGTAA AAGAGCAGCT 23940
GAACTGGACC AGTATCAATT CGTTTTGGAC GAGCGTTTCG TTTGACGGGC GTGACTTTGC 24000
GTACGACCCG TCCAGCGGCT GGTTTTTAGG ACAGCGCTGT ACGTTCAACG GGCTCGTTCC 24060
CTTTCTCGAA AAAGAGCATT CGTTTCGCTC CGACACCAAG GCCGAGTTCT ACGTTACCCT 24120
GCTCAATTAT CCGGTCTCTG CCGTGTGGAA CTTAAAGTTT GTCTTGCTT TCTACACCGG 24180
TGTGTCCGTT CAAACGTATT ATGGACGGAG GAAAAGCGAA AACGGAAAGG GCAACGGGGT 24240
GCGGTCCGGC GCGCTGGTAA TAGACGGCGT GCTGGTAGGG CGCGGGTGGG GCGAAGACGC 24300
AAAGAAAAAC ACCGGAGACC TGCTGCTCCA CCACTGGATT GAGTTCCGCT GGCCGCTGGC 24360
GCACGGCATT GTGTCCTTTG ACTTTTTCTT TGATGCGGCA ATGGTGTACA ACATCGAAAG 24420
TCAGTCCCCA AACGGGTCAT CGTCCGCCAG CAGCTCCAGC AGCAGCAGTA GTAGTAGCAG 24480
TAGAACCACC AGCTCTGAAG GACTGTACAA AATGAGCTAC GGTCCGGGGC TGCGCTTTAC 24540

340

ATTGCCGCAA TTTCCGTTAA AATTGGCGTT CGCAAACACC TTCACGTCAn CCGGCGGCAT 24600
 CCCAaAAACa AAGAAAAATT GGaATTTTGT GTTGTGCTTC ACGGTAAATA ATTTGTAGCG 24660
 TTCCCGTGnC CGTTTTGAAA nGGTCCGGGG GCTGCGTCC 24699

(2) INFORMATION FOR SEQ ID NO: 27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4637 base pairs .
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

TGCCATGGAA ATGTGACCTA CGCCTCCCTT TATGGGCCAC AGGCTGGGAA TGTCAGAAAA 60
 AAGTGCTGTT TGCGAATTGA GCAACTTTCC TATCTCCCGT ACTGGCTGCA CAGAGTTCTG 120
 AAAATAGGCG GCTATGCGCC GCAGTTCCTC TGGCTCCGAC CCAACGCCCT GCGCGTTTTT 180
 GCCATGCTGT TCTGTCACTC CAACGTTTCC CTTTTGTGCT CCATCCTTTG CTGACGCATC 240
 ATCCGGCTCG TTAGACTGGT TTGTGTCGGA TACACTTCGT ACTGGTTTTT CTGCCCCAGA 300
 TTGGAGCCCA CTGAGGCCAA CCTGAGAGAA AGTTTGGGAA AGGGAAGTCT GGAACGCCTT 360
 AGAAGTGCGA ATAAGTTCTG CTGCTTCTTG GCGCAGGAGT GCAAGGTGCA CCTGCGTTCT 420
 GTCCACCTCT GCGCGGACCG CCGCCAGGAA CgTGCGGAGG TGACAGACTG ATGGGCAAAC 480
 CAAAAAAAG AAGCCAACAC GCCAACACCG CACAGAAGAA CGCACAAAGAG CGTGCGAGCG 540
 GTAGTACAGA AAGTCCGGGC CGCACACTGA GAGTGTGCTA CTAACATGAC GGTGAGTTCT 600
 GCACGGCCTG CGGCGCCCAG GCGCGCTGCG GCTTCGCGTA CAAGCCGCGC ACAACGCGTA 660
 CACCGGTCAA TACAAAAACG AACGAACGCG TACTCAATAC GCTTGTATCT TCGGATGCGT 720
 GCCATGCGCA AGACCTCTCC GGGGAAAACG GTATCACCGC GGTTAGATAC TGTCAAACCG 780
 TGGAActACG GGACGGTCTG AGCACGAGGA CGCGGGCACC CAACCCAAGC TTCGGTTCTA 840
 CTTGCTCTTT TCTTTAAAGA GGACCAAGAG GGCACACGAG CCCCACCCT GGCCAGGAGC 900
 GAGCACTGGC TTGGCCCCCG CGCTGAGGGA AAAGCGGGAG GACTTTTCCG TGCTGCTATA 960
 GCTGATTGTT GATATCAGCC AACGTTTTGC GCAGGGCAGG GTTCTGCGCG TAgtAGTACT 1020
 GCTCGAGctC CGCTGCAGTA AGCCCAGAGA GCTCGTGGCT CATGTAATGG AACCCTCGT 1080
 TATCTGCCTC GCTACGTACC TCGTGCTTGA TGCACCAGTA GTCCGGCAAC ACCGGGGGCT 1140
 GTTTTTCTCC CACGAATACT TTGTAATTGA AGACAGCCAC GCGGATGTCG CCACGCGCAA 1200

GGCCCTTTTG	CATAAGCAGG	GAAGCGATGT	AGTTGATGGT	TGCGCCTGAA	TCGAAGATAT	1260
cATCTACGAT	GAGCACCTTA	TCCCCGACGC	GTAGGTA	AGGAGGGTAG	GTCCAGCCAT	1320
CTACGCTGAT	GAcGCGCCss	TTACGCAAAT	CACAGTGCGA	GTGAGCAACT	ACCGCTGCGT	1380
ACAGGATAGG	AGGCTCTGCC	TTGTACGCGA	TGGTTAAATA	CTCATTGAGC	ACGTTACCCA	1440
GATATACTCC	ACCCCGTATG	GGGACGTACA	TAACCGTTGG	CACGAACCTG	TCTGCCACGA	1500
TGCGCCGGGC	CATACCGAAA	CCCTCATCAC	GGATCACATT	GTACGGAATA	AATCGCTTTT	1560
TCACGTTAGC	CTCTCCTGCA	CGAGCACGAA	AACACCCCTAC	ATCTAATGCT	TTTTTAGCAT	1620
CATGGCAAGC	TCTTTTCTA	TTCGTGTCGT	GGCCTGGAAC	TGTCTTTGTT	GAAAGTTCGC	1680
CTGAATATTT	TATGCTCCTG	CGCGAGGGCC	CCCGTGATAG	AAAAGTTGGA	AGAACTGCGC	1740
GCTCACTGGA	GAAAACTACA	GCAGGAAGTG	GAGAATCCTT	CGCTTTTCTC	TTCCACTCAG	1800
AGTTATCGTG	AACGTATGCG	CGATCACGCC	TATCTTTCCA	GACTGATGGA	AGAGTATGAT	1860
CGCTATTTGC	TTACTGAGAA	GCAGTTGGaA	GACGCGCACG	TTCTCATCCA	AGATGAGTCG	1920
GATGCTGATT	TTAAGGACGT	TATTCGGCAA	GAGATCCGTA	CAC'TTGAAGC	TGCACTGCAC	1980
ACGAGTCAAA	AGCGACTAAA	GACGCTGCTT	AT'TCCCCCG	ACyCTTTGCA	AGAGAAGAAT	2040
ATTATCATGG	AAATTCGCGG	CGGTACCGGC	GGTGATGAAG	CAGCGCTCTT	TGCTGCAGAT	2100
CTATTTAGAA	TGTACACGCA	CTACGCTGAG	TCAAAACAAT	GGCGCTATGA	AGTCCTTGCA	2160
GTGAGCGAAA	CAGAGTTGGG	AGGATTTAAG	GAAATTACGT	TCTCTATCTC	GGGGCGCGAT	2220
GTGTATGGCA	GTTTACGTTA	TGAATCGGGT	GTGCATCGCG	TTCAACGTGT	CCCTAGCACT	2280
GAAGCGTCGG	GGCGCATCCA	TACCAGTGCG	GTTACCGTTG	CAGTGCTGCC	TGAGATGGAA	2340
GAGACTGAAG	TGGACATTCTG	TGCTGAGGAC	GTGCGTGTG	ATGTCATGCG	TGCAAGTGGT	2400
CCTGGTGGGC	AGTGTGTCAA	CACCACTGAT	TCTGCGGTGC	GTCTTACACA	TCTAcTACGG	2460
GCATTGTCGT	TGTCTGTCAG	GACGAGAAGA	GTCAAATCAA	AAACAAAGCC	AAGGCCATGC	2520
GTGTATTGCG	CAgCAGAGTG	TATGATTTAG	AGGAATCGAA	GCGCCAGGTT	GCCCGTGCAA	2580
GGGAACGCAA	AAGTCAAGTT	GGTTCAGGGG	ATCGTTCCGA	GCGCATTCGC	ACGTATAATT	2640
TTCCCTCAGAA	CCGTGTTACG	GATCATCGCG	TGCGTGTTAC	GCTCTACAAG	CTAGATGCAG	2700
TGATGCaGGG	TGCGTTGGAT	GACATTATCG	AGCCaTTGTG	TATTGCGTCT	CGAGAGAGTG	2760
TAATCTAGTG	CAAGAACTCT	GTACGATTCTG	ACAGGCGCGT	ATGTACGCGC	GAGCGTTGTT	2820
TCAAGACGCC	CCCTGTTTGC	GCGGACAGAA	CACACCGCTT	TTAGATGCAG	ACCTTATTCT	2880
GTCgAAGTTG	cTTGCGAAGC	CGCGTGCGTG	GATTCTCGCC	CACCAGCAGG	ATGAGATTGC	2940

CTCCGTTGCA CACGAGTTTA AGCGTCTCGT GCATCTTCGT TGTA _g GGGAC GTGCGTTGGC	3000
GTATCTGACT CGAGAAAAAG AGTTTTTTGG TCTGAGATTC CGTGTACACC GTGTACGCTT	3060
ATCCCTAAAC CGGATACCGA ATTGCTTGTA GAAAGTGTCC TGGCGCACGT TGCGTCCCAA	3120
ATGATGAAGC CGCGTTCAGT ATCTGTGCAT AAAGACACAA GTGCACTGCC TGTCTTGAAG	3180
ATATTCGAGG CGTGTACGGG ATGCGGGTGT ATTGCCATTG CACTTATGCA TATGTTGCGT	3240
GCGCtGGCAC GCCACCTCTC TATGTCATTG CATCC _g ACAT TTGCATGCGG GCCcTTGCCG	3300
TAr _s GCGGTA TAACGCGCGC CGACTCTTGG ATGTATCTGC AAATTCGCGC GTAcGTTTCG	3360
TGCACGCAGA TGTGCGTGCT CCTATTCCGT TCTTTTCTCC TTCTGAAGGC ACGGACnTGG	3420
TACAGGAGCG CGGGGTGTGC GTTCCGTATG ATGTGATATG TGCAAATCCG CCTTACtACC	3480
GAGTGC _g CAA GCGCGCGCGC TGTTGCAGGA CGGGAGAGGG GAGCCTCTCG GTGCCTTAGA	3540
TGGGGGTGCA GATGGGCTAG ACTTGGTTCG CGCATTGC _g CA CACCACAGTG CCGCAGCGCT	3600
AAAGGAAGGC GGGTGC _g TGT TTTGCGAGGT CGGCTCAAAC CACGCACAAC GTGCAGCGCG	3660
CATCTTCCAG GCAGCAGGGT TTGCCACGGT GAAAA _{TT} TCA AAAGATCTCT CCGGGAAAGA	3720
GCGCCTGATT AGCGGGATAC TGCGCTCGCA GTCTAGAGCT GTAACAGCGC CGAGTGGCTA	3780
GGGTGAAACA CGGCGACTGA GTGGTTATCC TGGCGTTTGC AGGTGGATGT nCGCGCCGCG	3840
TTGGCCGATA GGCTGAGTAC ATGAAGGAGT TAGAGATCAT CCACCATTGC GGATGACTT _g	3900
CGTAC _g sGrT TGATTTTGCT TCAAAAAAAT CGGTTTAAAT CAAGTTTGCG TTGCTGTACT	3960
GACTTACCCA GCTCATCGAT TCCGGTTCTA CACGGTGCCC CTCGTACAAG GGCTCAAAGC	4020
CTAAATTTTC GCAACGAAGA TTACCCAAAT ACCGGATATA GTCTGCCACC ATGTGGCGAT	4080
TTAGTCCAGG GATCTGATCC CCAATGACAT AGTCCCCCA CTTAATTTCT TGTTTCGATC	4140
CTTCGCGAAT CATATCGCGA AATAAGCGTA CATTGCGTGC AGTGAACACC TGwGGCTCTT	4200
CCTTTTGCAG TTCTTGAATA ATGGATCGAA AAAGCCACAG GTGTGTGTTT TCATCGCGGT	4260
TGATATAACG AATTTCTCTG ACCGAGCCGG GCATCTTGTT ATTACGCCCC AAGTTATAGA	4320
AGAACATAAA ACCCGAATAG AAATAAATTC CTTCCAAAAC ATAATTCGCA ATTGCTACCT	4380
TCAGCAGTGC GAGTACGCTT TTGTCATCTT GAAACTCGTT GTACAAGTTG CCAATGAATT	4440
TATTGCGCGC AAGCAGGATG CTCGTCGTCC TTCCACTGGT ATAGAATGTC ATGCGTTCTT	4500
CGGGGGAGCA AATGGTGTCC AGCATGTAAC TGTA _{ACT} CTG CGAATGCACA GCCTCTGGAA	4560
AGCCTGAAGG TTAGGCACAG TTAATCTCAT TGCGGTAAGT ACTGACCAAT ATTGGCAGAT	4620
CGCAGTCTGG GATGCTA	4637

(2) INFORMATION FOR SEQ ID NO: 28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10820 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

TGTAGACGGG GCACTGAGTG CTGAATGCGC AACGTCTCCA CGAGAGATTC AGAAGGACGC	60
ACGGGTCATG CCCCCACCAA GAATCGTGAA ACTGTTTTTC CTGTCACGCG CAGAAGCATG	120
CCGgCTTATT TTGGTTCTAA CGAACATTTA TACGCACGGC AAAGAAGTGG GTGAGCAGTG	180
CCACACCTCC CGCTCCTGCC AGCATGGAAG TGTATACCAC TGTACGCGCA TTGAAAAAAC	240
AAAGTGTCAT GACTGTTGCA GAAAAAGCAC CCATGAGGAG GAATATACAC AACGCAGCGA	300
TTAACCCGAG GAGTGGCAAG CGCGTGCGCA TAGAAAAAGA AACATGCGCG TGTAAGTGCA	360
GCAGGTTAGT CATGTACAGC ACGAGTGTC TACACGCGC CAGAAGGTCA GGATCATTA	420
GTTGTGTATA CACGTGCACA AAGAAAAACG ACGTATACGC GCCGAAGAGC GCAGACACGC	480
CCGATACGAG GGATACACGC TCAAGTGAGC GAGAAGTAAA GAGGAAAAAC GGCAGGCAAA	540
AGAGGGGAAA AACATAATCA AAAAGAAAAA AGCGCATCCA CTGCTCTTCC ACAAGGGCGG	600
AATCCGGCGG ATAGTACCCG AGAAAAATG AACGAAGTAG GAGGAGAGGC ACAGCAAGCA	660
CGGCGCCGTG CACAAACGAA ATAAGTTCCT GAAGTGGGTC CCCAGCGTCC GCGAAAGAGG	720
AAAAGAACAA AAGAGGCAAC GAAATAATGA GAAATATTTT CACTATCGAT ACCGTAACCA	780
ACGGGGCACC GCATACGGCG AAAGATCACC GCGGGTATGC GTTCGCCCCAT CAAAAGTGCG	840
CCGCTTTACA GCACAAGCTC GCTTGAATA TCAGCGTTAC TGTAGACGGC CTGAACATCC	900
TCTTCTTCTT CGAGCCGGTC AATCATCTTC AATACCTTAC GCGCAGTCTC CTCATCAAGC	960
GCCAGGTACG TGTCGGGAAC CATAGATATA CCGGCAGATA GTGATTCCCA CCCCTTGGCC	1020
TGAAGGGATT CTAGGACCGT CTCAAACGTA CCGGGAACCG TGGTGACGGT GAGGACACCA	1080
CCGGCGTTCT GTATGTCTC AGCACCCGCT TCGAGGGCAA GCTCCATGAG AGCCTCTTCG	1140
TCAACCTGTT CGGAATCGTA CTCTATAACT CCTTTGCGAT TGAACATATA GGAAACGGAT	1200
CCTGCCGAAC CTAAATTACC CCCATTACGG GAAAACAAAT TCGGCACGTT CGCGGCCGCG	1260
CGGTTTTTGT TATCGGTGAG CACCTCGACC AGAACGGCAA CACCGCCCGG CGCATAACCT	1320
TCATAAACGA GCTCCTCATA GCTACTGCCA GATAACTCCC CCGTACCCTT CTTAATAGCC	1380

CGCTCAATGT TATCTTTAGG CATATTAGCG GCACGTGCCT TAAGGATTGC AGTCCTCAGA 1440
CGTGGATTAG CCTGTGGGTC ACCGCCTGCC ATGCGGGCAG CAACAGATAT TTCCTTGATA 1500
AACTTAGTGA ACAACTGCCC ACGCTTTGcg TCCGCAGCTC CCTTAGCATG CTTGATAGTG 1560
GCCCATTTAC TATGTCCAGA CATGAGATCT TTCCCCTAAT GCCCCAAAAT GTACGTACCG 1620
GAACGCGGGC GCCTGATGCT AGCACGGTGT GCGCTTTTCT CCAAGTCCCG cTGGCGCATA 1680
TTGCACGGCC CGCGTAATTA CCGCGGGCTT AAGAAGCACA GACCTAGCAC GTCGGCGCGT 1740
GTGCTAAATC AAACAGATCT GCGTAGGCGC GCAACACGCC TTCCACCTCT CCTGCTAATA 1800
TGTGTTGTGC AAGCGTCTTG CCCAGCTGCA CTCCTTCTTG ATCAAAGCTG TTCAAGTTCC 1860
ACGCAAATCC TTGGAACATA ATCTTGTTTT CAAAGTGTGC AAGAAGTGCG CCGAGCGTTT 1920
GTGGGGTAAG CGCTTTAGgT ATAGCAGACT GGATGGACGC TCCCCGAAA ACGTTTTATT 1980
TGCATCCGCG TGCTCTTTTC CCCTGGCGAA CGCGACAATT TGTGCGACGA CATTTGCAAG 2040
GAGCTTCTGC TGACCGTAG ATCCACGGAT TATCGGATCC TGCCCGAGCT GACTATGTTG 2100
AAAGGCAATG AACTGAAGCG GCACCACCGA TGTTCTTGA TGCAAATGTT GGTAGAACGA 2160
GTGCTGACCG TTTGTCCCAG GCTCTCCAAA GATCACC GCGGTCTTAT ACGTTATCGG 2220
AATGCCGAAG CGGTTAACAC TCTTGCCGTT AGATTCCATA TCTAGTTGTT GCAAATGTGC 2280
AGGAAAGCGA GCCAACGCCT GGCTATAGGG CAACACCGCG GTGTGCTCGT ATCCCAGAAT 2340
AGTGCGCTCG TACACACCGA TGAGCGCGTC AAGAAGTGCT GCATTACGCC GTATGTCTTG 2400
TTCCTGTGCT GCTCGGTCCG CCTCTGCCGC ACCGGAGAGG AAGTGCCCAA ACACcTGCGG 2460
TCCAAACGCA AGCGTGAGTA CCACAGCGCC ACAGACAGAG GAACTAGAGT AGCGTCCACC 2520
GATAAAATCA TCCATGTAGA AGGAAGCAAG GTACTGGGGA TTATTTGCAA GTGGACTGGT 2580
CTCGCTGGTA ACTGCCACGA ACTGTGTGTG CGGTCTAGA CCTGCTTGAC GAAGgACGTG 2640
TGCGACGAAA AGCTCATTAC TGAGTGTTC AAGCGTCGTA CCACTCTTTG ATACCAAAAT 2700
AAAAAGCGTG GTCTCAAGCG GTAGTTTTGA GAGTACAAGC GCTGCGTCGT CTGGGTCCAC 2760
GTTGGAGATA AAATGTGTGC GCATCTTAAC CGCCTGGTGC CTCTGTGCCC AACCTTCCAG 2820
CGCGAGATAC AACGCCC GTG GACCGAGATC TGATCCACCA ATTCCAATTT GTACAACGTC 2880
GGTAAACGGT GCGCCGCGAG ACGTGCGCAG CCCCTTCGT GTACTTGCCs TCGGAACGCA 2940
CATaCTCTTT CGTATTCTTT TGTATAAAAG GCGTGCATAT CGCGCACTTC GCACGGCAAC 3000
GAGGCAAGCG ATGACCCCTG CACGCCGAGG CGCGTTAGGT GATGCAGCAC CTTACGTTTT 3060
TCCCCGTGT TTATCTGTGC TCCTGCGCGC AGGcGTCGTA CTTTGCGACT AATTCCTGCT 3120

CGTCTGCAAG AGCAGCAAGC GCCGTGAGAA TTTCTTCATT CACTGTTTTC GCTGCGTAGT 3180
GATAGCGCAG CCCAGCCCCC GCGTCGGTAC AATAGCGCCG CACACGTTCT ATCCCCCTCTG 3240
GTCCACAGAG TACTGTCTTC AGCGACGGCG CACGAATCGC CTGCAGGcGG GCGTATGCGG 3300
CACACTCGTC AAGATTTCTC CAATTCACCTG CGCGTTCTCC TTTTATCGTT CTACCCCGTA 3360
GggTTTACCT ACAGACATAT CGCCGGCTGT TCTATGTATC AAGACGCGGC ACGACAATCG 3420
TCGCGAGTGC CGGGTTCTTT TCTAAATCTC TTTTAAATCC TGCTGCCCCG GCCTTATTGA 3480
CATAGGTTGG ATCCTGGAAC GAGTAGGTAA AACGCGGTG CACGTCGTAT GTTCCCTGCA 3540
TGAGTGATA CGTGTCTCA GTCATGACCA ATTCTTCATC TGTGGGATT ACCAGAATGC 3600
GGACGGGTGA ATCGTCTGTA CTAATTTAG TTTCTGCATT GCGCGTGGG GCCAGTTCAT 3660
TTTTTCGCGC ATCAAGTCGG ATGCCTAGGT GTTCGAGTCC TCGGCACGCT GctGCGCGTA 3720
CGTCGCAACA CATCTCTCCA ACActGCGGT AAAGACAAGC GCGTCCGGCT GTTTACCCAA 3780
AGCTGCAACG TATGCGCCGA AGTATTTCCG GATGCGGTGT ACCTCCATGT CAAAGGCAAG 3840
GCGTGCAAGC GCGTCTCCAT TTTTCATGGC AGCACACACA TCGCGTCGGT CCACGTATTT 3900
TCCGGTGATG CCTAGCAAAC CGGACTGTTT ATTGAGAGTG GTGTCGATGT CTGAGACAGA 3960
CATGCCTGTT TTTCTCATAA TGTAAGAGC AAGCGCAGGG TCGCAGTCCC CGCAGCGTGT 4020
TCCCATAATC AGGCCTTCTA GCGGGGTGAT GCCCATGGAA GTGTCAAAGC TGACACCATT 4080
TTTGACACAA CACATGGAAG CGCCGTTTCC AATATGCGCA ATGATTATGT TTGTGTCCTC 4140
AGCCCTTTTT TTGAGAAATGA CAGAGGCGCG CTTTGCAGTA TAAAGAAAAC TCGTGCCGTG 4200
AAAGCCGTAG CGACGTACCG CGTATTCTTC GTACCACTGC CGGGGCACTG CGTACATGAA 4260
GCTAGCTTCT GGCATGGTTT GATGCCACGC AgTATCCATA ATGGCACAGT GGGGAACCTGA 4320
GGGGATGACC GCCTGGGCAG CCTCAATACC ACGGATGTTT GCGGGGTGTG GGAGAGGGCC 4380
AAGGTCTTGA ACAGAGCGAA ATGTTTCTAG CACGTCAGGA GTCACAACGA CAGACTTTAC 4440
AAAGCGATCT GCTGCGTGTA GGACGCGGTG TCCAACCTGCC TTGATAAGAC TCATGTCGCT 4500
GATAACACCG ACGTGCATCG CGGTGAGGGT GCTGATGATA AGCTGCACCG CTTCGGTATG 4560
GGTAGGGCAG GGACTTTCCC GAACGTGGTT CTCTCGGCCG TGCACCTCAT GCGTGATAAC 4620
AGATCCTGCC TGAGTAACAC GCTCTACCAC GCCGACGGCA ATCACCACAC GCTCTGTCCA 4680
GTTATACACC TGGTATTTTA CAGATGAACT GCCGAGTTT AGCGTGAGGA TAATCATAAT 4740
ACACCTCCAC CGTTTTGGTA ATTTCTCGGA CACCGTAGCA TACACGCAA ATGCGCCACT 4800
TTCTACACC GTTGGcTTAC ACTGcTTACG CGGATATAGC CCCCAGCA GCGtaTCCAG 4860

CAGCCACTGC GCTTTGGCAG TGTCCACGCG TGCAAGGGcA CGGaCGCGTG GGGATCTGAC 4920
GCGACTGACG CGAGCATGTC CTGCTTTTCA CGCCCGGTAA CTACGACGTA aTTTCGTGTG 4980
CATTATTGAT AAGGTGCCCC GTGAAaCTCA CACGTTTCTG ACCGGTGTCT GGGTGAGTTG 5040
CCACGACGCA ACAGCCGCTG TGGTCCCACA GCTCTATTTT ATGAGGGAAA ATAGACGCGG 5100
TGTGTCCATC CGCCCCATA CCCAGGAGTA TAATATCAAA GCACGGCAGC CCACGCTGTC 5160
TTGGGAGCCG TGCTTCAATT TCCTGTGAGT ATGCGGCGCA GCGCTCTCC GGGGCGTCTT 5220
CTCCCTGAC GCGAAACACC GCGTCAGgAT TTATTTCCAG AGGCTCAAGG AGCGACTAT 5280
GGGTGATGTT GAAGTTACTC TGCGCATCCG TGGGGGGTAC GCAACGCTCA TCGCTCCAGA 5340
AGAAGCGGAG GCGCTTCCAA TCAAGGTGGT GTCGAAACTC GTGCGCCCAA GTTCTGAAAA 5400
TCTCCCTTGG AGTGGAACCC CCCGACAGGG CCAACCAGAG AATCTCTTGT GTTTTGAGCC 5460
GAGAATCAAA CACCGAAACG AGGAACGCCG CGATGGCAGC CGCATCCTCA AAAATATGCT 5520
TCTTCATGGG CGAACATCCT CCTCTCTCCC GCTACGTTCT AGTGTCGTTT AAGGCTCGGC 5580
ATTACCGCTA GAGTCGGCAG GCAAAATCAT CGCTGAGCAG CGTAGAAGAG GGGTGATGCC 5640
ACCGTGGAGC ACTCCCTTTG ATCAGGTCGT CTGCaGctTC GGACCCAGC TTCCTGCAGG 5700
GTACGTAAGT AGAGGACTCT TGTTTGATTT CCATGCGGCA AGAATAGGAT CTATGAAGCG 5760
CCATGCAGAC TCCACCGCGT CATCTCGATG GTAGAGCGTG TTGTCTCCAT TCATGCAGTC 5820
AAGCAATAGC CGCTCATACG CGTGGGGTAA GTGCGAATAG GTAAGAGCCG AATACTGAAA 5880
ATCAACACTG ACGGGAATAG TCTTGAACCC CGCGCCGGGC TCTTTGAGGT CGATTTTAAG 5940
CTGAATTCCT TCGTCGGGTT GAATGCGAAT GACAAGCGCG TTGCCCTCGC GTGCGCACGG 6000
GCGTTCGATG TGCTCGAAAA GCGCGATGGG GAGCGTTCGG TAATGGACGA TCACCTCAGT 6060
GACGCCCCGTG GGCAAACGCT TACCCGTCCG CAGtAGAAGG GAACGTCCAT CCACCGCCAA 6120
TTGTGCATGT AGCACTTGAG TGCGGcAAAG GTTTCAGTGC ACGAGCGAGG GTCAACGCCT 6180
GACTCCTCAA GGTAGCCGGG GACGGCTACA CCGCGTATCT TGCCGGCGAC GTATTGGGCA 6240
CGCACCGTAT GCTGCATGAC GTCGCGTTCT CCCATAGGGC GCAGGCAGTC AAAGACCTTT 6300
ACGATTTTAT CCCGTAGACG ACTTGAACTC ACGaCGGCGG GCGCCTCCAT CGCGATAATA 6360
CCCAAGAGGA GTAACAAGTG GTTTTGGATC ATATCGCGCA ATGCACCGGA CTGGTCGTAG 6420
TAACCGCCGC GGTTTTCGAC ACCTAGTGAT TCGCTTGCAg TAATTTCAAC GTAATCGATA 6480
TGGGTCCGGT TCCATGTGGG CTCGAAAAGG GGATTGGCAA AGCGAGTGAC CAGGATGTTT 6540
TGGACCGTTT CCTTACCCAG ATAGTGATCG ATGCGATAGG TTTGGTTTTT CTGAAAGTGG 6600

GCACGCAAGC	TCGCATTAAG	GTGcTGC GCG	GTTTCTAGGT	TGTAGCCAAA	GGGTTTTTC	6660
ATAACTACCC	TGCGAAAATT	ACCCTGTTCC	CGGTTCAAGT	GGTGCATAGC	AAGCTGCGTG	6720
GGGATAGTTT	CGTACAGGCT	AGGGGGAGTG	GCAAGATAGA	AGATAAAAGTT	GCCCTCGGTG	6780
TGCAGCGACT	GGTCGAGGGT	GCGCACGTAC	GTGGCAAAGT	CGGCAAAGGC	GACAGAGTCG	6840
GTGGGATCGA	ACGAGAAGTA	GTGGATCTTC	TGCAGGAATT	CGGTGAGGCG	CGCCGGGTCTG	6900
TGCGGTGTGC	GCACTGCATG	CTTTGTGACC	GCCTCTGCAA	GCCGTGCGCG	AAAAGACTCT	6960
GTAGACAGAG	CCGTACGCCC	TGCGCCGAGT	ATACCGAATG	TAcGGGGCAG	GAGCTCTTGC	7020
TCAAAGAGAT	CCCAAAGCGA	GGGGATAAGC	TTCCGCGCGG	CAAGTTCGCC	TGAAGCGCCA	7080
AAGATAACCA	GGATGTGCGG	GCGGACCGTG	CCGCTGCCAC	TGATTTTCCC	CATAAACCGC	7140
CCCTTCTTTC	AACGGTGCGA	CCTACACCGG	ATGTGCCGCA	GGsAaCTCTC	CGCTCCCTAA	7200
GGCACTAAAT	GCGGAACACC	GGCCCTATTT	TTACCATGAC	CAGCGAGGTG	CAGCAATACT	7260
TGGCCCATAT	GTTCGACCAC	GTCAGGTCCT	GTCCATTCCC	ATTTGCGCCC	TTTTTCAAAT	7320
TCTTGGTGAG	CGGCACGTTT	ACTCCGCTGC	CGAAGtGAAA	TCCAACCCAA	CGTGCTTGGT	7380
AAAGAAAATG	AGGAAATCCA	AATTTATCGG	TATCCCCACC	AGTTTGTCTG	CCTGCGTAGA	7440
AAGGATATCC	ACGCCCAGAG	ACGGAATAAA	TGCAAAATTC	TTGCCGCTGC	GTATAGCCCA	7500
GCCCACCAGG	AATGCGCAC	GGAACATAAG	AAAGGCAAGC	CCCGCGTCTA	ATTCTGTCTG	7560
GAACGCGAAg	cCGTTGTGCG	CTATTACCCC	CACTGCCAAA	CCGAGCGTCG	GGGTGTACAA	7620
AAGAACGTCG	GTCTTGGGGG	CGGTTTCCTT	TCCCCAGGGA	TGCGCCCTTA	CCTGTCCTAC	7680
tTCGGAGAAA	CAAATACCTC	CGCCGCAAAA	ACGCCTGCCC	CCATCCCGAG	CGCAGCGAGC	7740
AAAGAACcTA	CGCGCACCAc	GCACCGCGCC	CGTACCCCCC	CCCTCGcCGT	GTGCCACTGT	7800
ATACCCATAC	GATCTAACCC	CAGCTGTAGG	ACACGCCTAC	TGGGCCGATC	TTCCCGCGTG	7860
GGGTGTGAGA	GTGTCAAGCC	CTCCCCCCTT	CCTTGCGAAG	AGGAGTATGC	CAAACGGTGA	7920
GAAAAACTTG	ACGGCGCGCG	CTAAACGCCT	AATAATTGCC	TCGCAGCCTT	TAGAAAAAGG	7980
AGGAGCTCGT	GATTGCGGCC	CTCTTTTCCC	TCTTTGCGTC	CCTCCATGCA	AACACGCACC	8040
CGGCAGATCT	CGCGCATGCG	GCAGCGTTGG	CACTGGCCCT	CGCGTTGCTT	CCTCGGAGTT	8100
CTCTCCTGTG	GTACCTACTG	TTTGCCGTCT	GCTTTTTTAT	ACGGCTGAAC	CGTGGTCTGC	8160
TCTTGCTATC	GCTCGTGCTG	TTTGGTTTTG	TCGTTCTTTC	GTTCGATCCC	TGGCTCGACA	8220
GCCTCGGCAA	TTGGGCGCTG	TGTTTACCAC	GGCTGCAACC	CGTCTACCGC	GCCCTGATTG	8280
AGATTCCCTT	CGTAGGGCTT	GCGCGCTTTT	ACAACACTAT	GATTGCCGGC	GGTCTGGTGG	8340

CAGGTGCGCT GTGCTATTTG CCGTGCTATG CTCCTTGACACr CTGCGCGGTG ACGGCGTACC 8400
GTACATACCT GTACCCTAAA ATTACCATG CGACGATTTT CTTTCTTGTC CGGAACGCCC 8460
CGTTGTGCAA AAGGTAAAGA AGATACTCAG CGTCAGGGAG AGGTTTTCAT GAGCGATGAT 8520
TCTACACCCA AGACGCCTTC GCGCCGATT CGGCATACAG GAAGGAGGCG CACGCTGCAT 8580
CGGTTCTTCT GCAAACGGTA CACTCCCCGT TCTCTCAAGC GGTTCCTGCG CCGAATCCAT 8640
ATCCCTGCTG ACCGCGCGTA CTGCATGCGT TACCTTGACAG ACCCCGTATC CACCCCTGTC 8700
CGTGTGTTTG GCCGCACGCT CCTTTCTCGC ACGTATGTTT GCTTCGATCA GcAGGCTATC 8760
GCGCACTCAG CGGACCTGAA GCGGCTCAAT GCCATTGCAG CGTCAATAGC AAAGCAAAGG 8820
GGGCGGGTTA ATTTTTGGTC CCTCTCCATG GCTTGTGCGA GCGTCCTCGC GCTTCTCGGG 8880
CTCGTGACT TGATCCGAAA TGTCAATGCT CGGCGTGTCG TTATCGGTGG TTCTGAGGCC 8940
GTCTTTGGTG CGCGGTGCGA AgCGGCAGTG GTAGATCTTG ATCTATTCAA CGCGCGCTTC 9000
CGCCTGAAGA ACTATGCGGT GGCAAACAAG CATCATCCCA TGTGGAACTT GTTTGAAATC 9060
GAAAGTATCG ATATCCACTT TGACCTCCTG GAGCTTTTCGC GGGGTAAGTT CGTCTCACAC 9120
ACGATGGTTG TAGAGGGCGT GACGTGGAAC ACGCCGCGCA AAACGTCTGG TGCTTTGCCC 9180
CCGCGCCGCG CAAAACGTCA ACGTGTGCGC AGTAGTAACC CGCTTATTGC AAAAATACAG 9240
GAAAAAGCGG CGGAGCTGGC CGCCCCCGTG TCTTTTGGCG CAGGGTTTTC TGCGCTCAAA 9300
GCGCAAGTGG ACCCGCGCAT TCTCCTTGAA CGCGAGGTGA AGGCGTTAAA AACTCCCACC 9360
CTCGTACAGC ACGTGGGTGC GCAGGCGCCC AAACCTGCAG AGCGCTGGAC GcAGCGTGTC 9420
TTTGACGCAC ACGCCCGTGC GGAAAAACG GTGGCGGCGA TCCGTGCGGT GACTGAGCTT 9480
GACTTTCACG CTTTAAAGA CGTGTGCGCA ATAAACAAG GTATCGAGAC GCTCGATAGA 9540
GCGCGCCGAT CCACTGAGGA AGCCCTCGCT ACTGCGCGCA CTATCTCCA CGAATTGCAG 9600
CAGGATGTGC ATTTCGACATT GGGTCTTGCG CGCGAGTTCG CCGCGGCGGT aAAGGCAGAC 9660
GGTGCGCGCA TCGyCCGTGC cGCGGCGGCT ATCCGTGATA TCCAGGCAGA TGGAGGAAAG 9720
AAATTTATCT CTGGTCTTTG CACCGTCTTT TTGGCACGGA GCTTTAGCCA TTATTACCCC 9780
TATGTGGCGC AGATGCTTGA TTATGTCCGG GGGTCGACG GAACACCGTC TGATGGATCG 9840
CCGTCTGCGG AGGCAGAAAA GACAGCTCAG AGCCTTACGA CGCGCAAGCn CTTGCAGGGA 9900
GTAATTTTTT GTTTGAGCGC AACGTCCCTT CCGTGCTGCT GAGAAACATT GGGGTGTCTG 9960
CCGCAGATCC GCAGyCAAGA TTTTCTGTTG CAGCCCGTGT GCGCAATGCG TCAAACGACG 10020
CGCACGGGTT TGGCGAACCG ATTTCTGTTT TCCTGGACGT GGCTGCAGGC GCACAGGACG 10080

CCTcKcTGCG CGcGTGGTGG ATCTGCGCCG GCGCGATCCG GACTTAGTAG ACGTCTCGTG 10140
CACTGCGCGG GGTATTCCGC TCGCTGTCCC GGCACCTGCA GAAGGATTCC CTGAGCTTTC 10200
TGGCGTGCTT GGAmTGCATA CGCAGgTGTT TGTGCGCAAA GATCACTCGG TGGAACTCAA 10260
GATGGGGGCA CGTATTTTCAG ACAGCGTATT GCGCgCTGCG CCTTTTGAGC CGCGCGTGCT 10320
GTTTGACGTG TACGCGGATG TGTGCGCCA GATACGGCAG ATTGCATTTG AAGCTACGGT 10380
GCGCGTCTCT GCAGAGGGTG CGTTGAGTAT TTCGGTAGAG AGTGACGCAG ATGGCGCGTT 10440
TGTGCGCGCT CTTTCCCGTG CGTTGCGCA GCAGGTGGAC GCATTGCGCC GCGCGTCAT 10500
TGCAGAAGGG GAGCGATTTC TTGCTCAGCA ACGCCGCGTG TACGCACAGG AAATTGCGCA 10560
GGTAACGCAG CTCGTTTCCC GTGCGGAGGA CGCAATTGCC CAGCTGGGGG TGTCTTCTCG 10620
CGTGATACAG CAGAAACGGG CTGAGGCGGA GCGCCTTCTG GAAGCTGCAG CGCGCAAGGC 10680
ACTGGGGGAG GTGACTAAGg TGCCGCAGAC GAGCTGCAGA ACAAGGCGCG AGATGCATTC 10740
CGCTCCTTTT TCTAGGGGAG TGGCGCCGCC CCTTTTCGGT GCGGCCTCAG GGTTGCGCTG 10800
AnGCCGGTGC GGGCGCTTTG 10820

(2) INFORMATION FOR SEQ ID NO: 29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13257 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

CAGGACGGTA nTCTCGTCTC TACGCTGACG AAGTTGCCAC TGATAGTGGA GATCGGTTTA 60
TCCAAATGGC GTTGGTAAAA CTCTTGCCCC AGAGGGCGnC AGGCGGACAG AGACTACAGG 120
AGATTGTGGC GCCGAGTCAG TCGGACATCG TGCTTATCAT GCTGCTAACC TGGCTTGAGC 180
GTGCACGGCT GGACCGGTTT AATGCTGATG CGCTGCTTAC GCGCAGTGG ACCTATGTGT 240
CGCTGGACT GTATGGGGCG ACGGCGGGTA CCAATGTATT TGGTAAGCGC GTGCTGCCTG 300
CGCTGCGGTC CTGGCATTTC GATTTTGCCG GATTCTCAA ACTCGAAACC AAAAGCGGTG 360
ACCCCTACAC CCACCTGCTC ACCGGCCTGA ACGCCGGCGT CGAAGCACGC GTGTACATCC 420
CCCTCACCTA CATCCGTTC AGAAATAACG GAGGGTACGA ACTGAATGGA GCTGTGCCCC 480
CTGGGACtAT CAATATGCCA ATTTTGGGGA AGGCGTGGTG CAGCTATCGC ATCCCCCTCG 540
GTTCCACGC CTGGCTTACA CCGCATAAT CCGTGCTCGG CACAACCAAT CGCTTTAACG 600

TTATTAACCC CGCGTACACC CTGTTGAATG AACGAGCGCT CCAGTACCAG GTGGGACTGA 660
CGTTCAGTCC CTTTCGAGAAG GTGGAGCTCA GCGCCAGTG GGAACAGGGG GTGCTTGCTG 720
ACGCTCCTTA CATGGGTATT GCCGAGAGTA TGTGGTCTGA GCGTTACTTT GGcACGTTTA 780
TCTGTGGGGT GAAGGTGGTT TGGTGAGGGG TTGTCGTGTG GGCCAGAGAA CGGGTACGGT 840
GGGGGTGCGC GTTTTCCCCG TGGGGgCTGT GCGCGCTCAG TTTACAGGCG AGGGATTGCA 900
GGGGTATGTG CGGGAAGCGT CTGGGTAAAG TGATGGTGCT CGGGTGTATG TTGCCGGGTG 960
TGGCGGCGCG TGTTCCTCTC TCCCCAAGC TCGGGGTGTA CGGGGACGCA CGCGGCGGTT 1020
CTGACCTGTG GGGCATCTGC ATACAAGCTC CCACAATGCC AGATACAGAG AACCAGGCGC 1080
CTCCGCGCTA TGCgCgGAG ACACCGTTGG TGGGGCTGGA CGTGGCGTTC CGTGCGGAAA 1140
ATGGCTTCCT GCTCCAACCTG ACGGTGGACG CGGCACTCAC GCGTTTAATG TTCTGCGGCC 1200
GGTGTTTGGC CGGTATTTCG TTCAGACCGG GGAAGGTAG TACGCATCTG TCGGTAGCGG 1260
CGGGTTTGA GTGCACCGCG CTCATCTACG ATAGCCAGCA CTTTCTTTCG GTTCTTGGGC 1320
AGGGCTTACT GCAGCCGAGC AGCTCGTCTT ATTACAGCCG TAACTGGCAC CGCCACGTT 1380
CATTGCTTGG CGTGCTAACG TGCACTGCCA AGGAGGTAGG CGCCATACAC GAAGAGTCGC 1440
GTATTAAAGG GGTCTGTCAG AACTATGCGG TGCCGGTGCA GCTGGGGGTG CAGCACTACT 1500
TTGGCGCGCA TTGGGGGATA GACGCGACGG CTACCGTTTC GTTTGGCATT GACACCAAGC 1560
TGGCTAAGTT CCGCATCCCC TATACGTTGC GCGTTGGCCC GGTCTTCCGC ACCTAGGGGA 1620
GGCGCCGGGA GGAACGGGTC CTGTCGAAGA ATTGCGGGGA GGAGTGAAGG TATGTGGAGA 1680
AAATGTCTGG GTAAAGTGGT GCTACTCGGG TGTGCGTTGC CGTGCGTGGC CGCGCGTATT 1740
TCTGTCTCTC CCAAGCTGGG GCGGTATGGG GACGCACGTG GCGGTCTGA CCTGTGGGGC 1800
TTGTGTATTA AGGCGACCGA TGCAGAGGAG GTAAGTGGGG ATCCCGATGA CACGGAGATG 1860
GAGTATTTAC CTCCCCGTTA TGCGCCGGAG ACGCCGCTGG TGGGACTCGA TGTGGCGTTC 1920
CGTGCGGAGA ATGGTTTTCT GCTCCAGCTG ACGGTGGACG CGGCGCTCAC CCGCCTGATG 1980
TTCCGTGGTC AGTGTTTGGC CGGTATTTCG TTCAGGCCGG GGGGGGtAA ATACGTATCT 2040
GTCGGTAGCG GCGGGTTTTG AGTGCACTGC GCTCATCTAC GACAGCTACC ATTACATCAC 2100
CATCCAGGCC CCCAATGAGG GTTCGGTGTG TTCGTTTCGAA CATGGAGGGT GGTACGTTCC 2160
AAAGACAGTG CTGAgCCTGC TGAGGCGCCG GAAGTGTCaG GATGCTAGGG CTGAGTCTGA 2220
GGAATTGGGC ATCACGGGA TTTGCCaGAA CTACGCGGTG CCGGTGCAGC TGGGGGTGCA 2280
GCACTACTTT GCGCGCATT GGGGGATAGA TGCGACGGCT ACCGTTTCGT TTGGCGTTGA 2340

CACCAAGCTG GCTAAGTTCC GCATCCCGTA TACGTTGCGC GTTGGCCCGG TCTTCCGCAC	2400
sTGAGCGGGT GCGCGCTCAG CGTGCCCGT TTAGAAGGAg GCCGAGCGCT CCTCTACCGA	2460
ACCGTCTGCG TGCGCAACAA AGACGCGTAC GGTTCGCTCG GTGAACAAGC CATTtCAAT	2520
GACCCCCgGC AGTGCATTGA GCGCGCGTTC CATGTCTTGC GGGGTGCGCG TCGGGAGCGA	2580
TtgCCACCGC GcGTCTAAAA TAAAAtTTCC GTGGTCAGTC ACTACCGGTC CTTTTTTTCT	2640
TyACctCGCG TATGTGCACG GACAACCCCC AATCCTGAAG CGTGCGCATC ACGCTCATGC	2700
GGGCTCAGG CACCACttCG ATAGGnGAnT GCGCGCGTAC CTAAGGTTTC TACCACCTTT	2760
GTtTCGTCTA CGATGATAAC AAAGTGCGCG CTGTTGTATG CAGCGATCTT TTCTTGCAAA	2820
AGCGCAGCTC CACCGCCTTT GATGACAAAA TTTTGGGTGT CAATTTTCATC CGCGCCGTCG	2880
ATAGTCACAT CCAGTTTGCC CCCAATCCGT TTTGAACTGA GAGAAAAAAG GGGGATGTTG	2940
TACCGCTCAC ATATGAGCGC TGTTTGAAAA CTAGTGGGCA CTGCCGCTAT GTCAGAGAGA	3000
GTGCCGCGTG CAAGGTGATC TGCGATGCGT TTTACCGCAG GCATTGCCGT AGAGCCCGTC	3060
CCAAGGCCAA TACTCATGTG CGCGTGcAGC ACCCCCTCTT GAACGAGGGT GTCnCaCTGC	3120
GCTGGGCAAC CAGCAATtTC TGCGCGGTAA CGTCTAATGG GGTGTTTCGTC GTCGTGTTCC	3180
TCTCGTGcAT AGCTTTTTTC ACAAGTGcAC TCACGCGTCT GTATCCTTTT TGTGGTGCAA	3240
AAGAATATCT GCATTGTGCC aGCTGAGGGT TGCGCACTTA ATGCGCGCAG GCATGGATGC	3300
AAAACAGGCG AGGATGCACG CGTCCTGTAG GTGTGCCCCG TCCTGGTCTG TGAGGCACTG	3360
CTGTGCCATC ATGTGAAAGA ACAGCGCAAC CGTTTTTTGC GCCTGCGCCA CTGACGCACC	3420
CTTGATCAGT TCGATGAGTA TATTTGTAGA AGCGGTGGAC ACCGCACAAC CGGTACCTAA	3480
AAAGGCTACA TCAGCGATGC GATCACCTTC TCTCTTTATC AAGAGCGTGA GGTCATCGCC	3540
ACAActGGGA TTATGACCCC GCTCGATGct ACCGGCCCTT CTAACACctG CGGTGTTCCT	3600
GCTTGCGTGC GTACTCGAGC AGCActGTcG GTATATCGCT TCTGCGTTCA TAGGGAGATC	3660
TCCTTAGAGA AAGGCAGCGA ATGCCAGGAA GGCGCACTGG CCTAGCTGCA TTGAAAAATC	3720
CTGCCCCAGG cgTGCAAgCA CssGTcAGcg CCTcTACATC CTCCATGGTA TTGTATATGC	3780
AGAAActTGC ACGGCAACAG GACTGAATGC TCAAGTGCGT CATGAAAGGC TTACTACAGT	3840
GATCGCCGCT GCGAACCATC ACGCCTTCTT CGCCCAAGAT ATGCGCAGTA TCGTGCGAGT	3900
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ACGCGCGGAC TGCCTGcTC TCTAGGGACT CGCAATACTC AATCGCTGCA CACAGTGACA	4080

CGACAGCTGC	AGTATTCGCG	CTACCTCCCT	CGTACTTATG	CGGCGnACCC	TTAAAGACAC	4140
TTTCCTGTTC	AGTCACAAAA	TCCACCATGC	CTCCCCCATA	CAAAAAAGGA	GGCATGGATT	4200
CCAGGAGCGT	GTGCGGTGCG	CACAATACGC	CGACGCCAAA	AAGAGAGAAC	ATCTTATGGC	4260
CGGAGAAAAC	AAAGAAGTCG	CAGCCTAAAT	CTGCAACATT	TGGCACGCCG	TGCACCATAG	4320
CCTGTGCTCC	GTCAATGACC	ACCACTGCAC	CGACTTGGTG	TGCAAGTGCG	GTCAATTCCT	4380
GTGCAGGATT	TACCGCGCCG	GTGGCATTGA	CAACGGCAGA	GAAGGACACA	ATCTTAGTGC	4440
ACGCTCGTAT	CTTTTTCTGC	GCTTCTTGTA	TATCCAAATT	TCCTTCGGCG	TCTGGATACA	4500
GCCACTGTAT	CGTTGCACCT	GTGCAGCGGC	ACACGTGCTG	CCACGGTACG	ATATTTGCGT	4560
GATGATTGGA	GATAGCAAGA	ACGATCTCGT	CTCCTGCGCG	CAGCGTGGCA	GCGCGTAACA	4620
GTGAGCGATG	ATGTTGAGCG	ATTCGGTGCA	ACTCTTTGTA	AAAACGATAT	CGTGCGTTGG	4680
CGCTGCGTTG	ATAAACTGCG	CTGTTTTCTT	CCGGGTGTTT	TCTATAAGGA	GCGCTGATTC	4740
AACTGCAAGT	TCATGGGAGC	CTCTGCCTGC	GTTCCCATTC	AGATGGGTGT	GGTAGTGCAT	4800
AACGCGCTCT	AGCACC GGCG	CAGGGCGTTG	GGTTGTGGCC	GCGCTGTCTA	GGTAGTGGAC	4860
GCGGGGACTG	CGCAACAGCA	GGGGAAAGTC	TGCTTTATAA	TTGGGGCCGC	TCATGCCTTG	4920
CGCTTCCTAT	GTGCGCGATC	GAGGCTCTCG	TCAAAATTAC	GTACGAGTGT	CTCGCGGATG	4980
TGAGCGTCAT	CGATGAGGGC	GAATACGGGT	TTAAACGCAG	CTTCTATGAT	GAGGCGCTTG	5040
GCACCGTACT	CATCAAGACC	GCGCGACATA	AGGTAGTAGA	GCACATCGCT	GCCGATAGTT	5100
TCAAACTGG	CTGCGTGTTT	CCCGACAACG	TCGTCTTCGT	CACAAAAGAT	AGTGGGGATG	5160
CTAACCCCA	CGGCAGTTCT	GTCAAGCAAA	ATGGTACGGT	CTGAGAACCG	TGCTACAGAA	5220
TGGCTACACC	CGCGGTGCAA	AAAAATATTT	CCACGGAACG	TTTTGCGTGC	ACCGTCTTTT	5280
ACCACCCAC	AGGCGCAGAT	GTGCGCGTGT	GAATTTTTTC	CTTCCACGAT	GAGGTTATGT	5340
TCAAGATCCA	TACGCCGCGC	TTTATCAATG	AAATACAGTG	GGTGAATTC	CACACGTGCC	5400
CACTCGTCCC	GAAGGAAGGC	GGAGTTGGAA	ACACCTGAGA	TCTGTGCACC	TATTTGTACG	5460
TCGTAGCAGC	GCACCTGCGC	GCTTTCCTGT	GCGTGTAGGT	GTACCGTTTC	AAAGTTCACA	5520
GCCGTAGGtG	CGTGTTCCTGT	ACTTTGATTA	ACTCTACCGA	TGCGCCACGC	CCCACCTGCA	5580
CGCTTACCAA	ACCATTCTCTG	AACGGAGCAC	GCTCAAGCGC	TTGCGGACCG	ACGA ₉ TGCGG	5640
GAGCATCCTG	TGGGGTATAC	CCTGCGCGTC	CACACAGACG	AGGACTTTTA	CGCGCGCCCC	5700
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GCCGTTCCGC CATTCTTTGA TATGGATCGA GCATGTACCT CCGATACCgT GTTCCTGCCC 6480
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GCGCGCTACA CCCTTCGATG AAGTGGAGGG ATGCGCCTTC ATCCACAATG ATGAGCGTGT 6840
GCTCAAATTG CCCGGATTGA TTTGCATTCA AGCGGAAGTA GGACTGCAGG GGTAAGTCCA 6900
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GTCTCTGTTG CTGTGTATTC ATACGCGCTT CCTCTAAGCG GTGGATATGC GGTCTGCTGG 7560

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GTAGTGCACC	AAACTCACGT	CACCGGTCTT	CACGATGGTA	CCGTCGACGA	GGATGTGCAC	7740
CACGTCAGGC	TTAATGTACT	CGAGAACTTC	TCGGTGATGG	GTGATGATCA	GGAATCCCAT	7800
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CTCACTGATG	CGCAAgcGAG	CAAGCTTCGC	ACGCAACTGC	gTGTGAAAGT	CGAGCACGGA	8040
AACTTTAGTA	CCAAGAACCG	CCTCTTTTGC	CGCGCGGAGA	AACTCCTCGA	CCGAAAGACC	8100
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GGTTTCCGTA	ATAACCATGT	AGGGCGTTGG	TTCCAACGTG	CCCTGCTCCC	ACTGTGCGTG	8640
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TCCATCCCTG	CTTCCAGTCC	GTCTATAAg	TGTGTATAc	CGTCTCCCgC	TTTGGTTTCT	9000
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AGAGTCAGGA	GTGCATCGAG	CGCGTAGGTG	TCCAGCGCTT	GTTGCCAGAG	CACTGTCAAC	9180
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CATACTTGCT	ATGCAGAGCC	TCTTCCGCCG	CACCTCCAGG	GGGAGCAGGA	GCAGGGGCAG	9720
GCGCGTCCCA	GGAACCATTT	GAGGCAAAGG	AAAGAAAGCA	AATATCCAAG	CTCACTCCAC	9780
TTGAGCCTAC	GTTCTGTGCA	CGGTAGCCGA	GCCTGCCGCC	GATGCCATCG	AACCCTGGCG	9840
CAAACCGCAC	CTCCTCTTCC	TTGTAGAGGT	CTGCAAGAAA	AGGTTTCCAC	AGTTGGGCAA	9900
AATTGGCGCG	AAAGAGGGGA	GCGGTGCCGA	TCGTCAATATA	CGCACCAAAG	CAGTGTAGCG	9960
TCGCTTCAAT	AGCGGTTTCT	TCTGTGACTA	GGGTAAAAGG	CTCACCAGGC	TTTTTGGTCT	10020
GAAAATTTAC	CTCCAAATCC	TTGATAGAAA	TTTCAGTCCA	CAAGCCACCG	TCAGATAATG	10080
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GGTACTGCGG	AACCCGTGCG	TTATCTGACG	AATGCGCGCT	TTTTCCCTTCT	CACTCTCTTC	10200
TACTTCCTGT	CCCTGCGCTC	CATTTCCTCG	TATCTGTACG	TTCACCACAT	CTCTGTGCTC	10260
GCCATCTCCA	TTCTCGCGGG	GCGGCACGGG	AGGCGGCGGA	CCTACTGCGG	GGTCGTAGGG	10320
GAGCGTGATA	CCCCACTGCA	ACCrGGCAAA	GCCTGAAAtC	CGCGGCGTAC	TTGCTAAGGT	10380
GTGCAGTCTG	GTTTCTGCAC	ACAGTCCTGC	TGCGGACGAC	ATAAAGAGGA	GCGCCACGT	10440
GCCAACTGAC	CTGACACGCC	TCCCTGCTGA	GTGTCCAGGG	GGATCATGGC	AGGAGGAGCG	10500
CACAGCCGCC	GACGGAGACA	GCAGCGTGCG	TCGCCGCCGG	ATTTTGCTTT	GAGAGTACAA	10560
CACCyTGCAG	GCATAAAGAC	AGGGACAGCG	TACTCCTTTC	ATGGCTCCAT	CCTAAAAGTC	10620
CGCAGTGC GC	GGCGTACGAG	GAAACGGAAT	AACATCCCGA	ATATTCCCAA	GCCCGGTGAC	10680
GTA CTGCAGC	AAGCGCTCGA	AGCCGAGTCC	AAAACCTGCA	TGGGGCGCGG	TACCAAAGCG	10740
ACGGAGATCG	GTGTACCAGC	GATAGTCGTG	AGGGTCAAAA	CCGCTGGCAC	GGATGCGAGC	10800
ACAGAGTACT	TCAAAC TGTT	CCTCGCGCTC	CGAGCCTCCC	ATAATCTCCC	CTAATCCCGG	10860
AACTAGCAGG	TCCATGGAAC	GCACCGTTGT	GCCGTcGGCA	TTGAGCTTCA	TGTAGAAGGC	10920
CTTGATTTC	TTTGGGTAGT	CATAGACAAT	CACCGGGCCG	TGGAACACCT	CTTCTGTTAA	10980
AAAACACTCG	TGCTCGCTTT	GTAAATCGCA	TCCCCAGCGT	ACGGGGAACT	CAAAGGAGCG	11040

CCCACTGTTC	TCCAGTAGTT	TAATTGCCTC	TGTGTATGTC	AGGCGCGTGG	CAGGCGCGCG	11100
GGCGACGTCT	TCGAGCATGC	GCGTCAGCTG	CCCTGGCGTC	CGCACTGGCG	GTGTGCGCGC	11160
TGTGcTGCgC	GCGGcAAGGG	GTGTGTGCGC	ccsCGCGCTt	CcGCATGgCT	GyGCgCGCtc	11220
GTCAAGGAAG	GCTATATCcT	GCGCGCAGTC	CTTGAGTGct	GCGCGTAGCA	GGTACGCCAA	11280
AAACTCCTCT	GCCACGTCCA	TGCAGTCAGT	GATGCGTGCA	AAGGCGATTT	CCGGCTCCAC	11340
CATCCAGAAC	TCAGAAAGAT	GGCGGCTAGT	ATTTGAGTTC	TCTGCGCGAA	AAGTAGGGCC	11400
GAAGgTGTAG	ATGCGCGTGA	GGGCAAGCGC	ATATGCtTCC	CCCTGCAGTT	GGCCCCGAAAC	11460
GGTTAGGCGC	GCTGCCTTAC	CAAAAAAGTC	GTCCGCGTAC	GTGAGTGCGT	AGGGGTGTC	11520
TGCCGCGCCC	GCTGCGTGTG	cTTCGCGCGC	AATACGCACG	GGATCAAAAG	TAGTGACGCG	11580
AAAGAGCTCG	CCTGCACCCT	CGCAGTCCGA	AGCGGTAATG	ATCGGTGTGT	GCACGTACTG	11640
AAAgTGTGCG	TCGGAGAAAA	AGCGGTGGAC	AGCGCCTGCA	AgTGCACTGC	GCACCCGTGC	11700
ACACGCGGCA	AAGGTACTAG	TGCGCGCGCG	CAGATGGGCG	TGCGCACGCA	AAAACTCAAA	11760
ACTATGCGAT	TTCTTCTGCA	AAGGATAGGT	TTCAGCAGGC	GCCTCGCCAA	GAACAGTCAG	11820
GTTGCAAGCG	CGCAACTCAA	GCGCTTGCCC	GGCGCCTGGG	GAGGGGACGA	GTGCACCCCTC	11880
GGCGCGAATG	CAGGCGCCGG	TAGTAACGCG	TTTGAGCGTT	TGAGCGAGCG	TTTCCCCCTG	11940
GAGGACAGCG	TCGCGGACAT	TAGGGATTG	CTCAGTTGCG	CCCCAGAGGA	AAGGGAGGCG	12000
GAACACTCGG	GcAGGGGAAC	GGTAACCTGA	AGGGTATCAG	GGCAAGAACC	GTCGCTCAGA	12060
CTGATAAAGA	CAGCGCGTTT	TGTCtCCCGT	TTGGAGCGCA	CCCAACCGTG	AACGCATTCTG	12120
TGCTGGCCCTG	AGGGGGGATG	AGTCAGAATC	TCCTTGAGCA	AAGGGTGCA	AGCACGCACT	12180
CTAACGCTTT	TACCTCTTT	GTGGAAGGGC	GTGGACCGGC	AAGCAGCTGT	GACGCCACGG	12240
CGCACGCCCT	GCGCGGCATC	TGCATGGAAC	GCCGCGCAGG	mCTGGGGAGA	GCGAACCGTG	12300
CGAAAAAGCG	TCGTTTCATT	TCCAGGGAAC	TTACTCTCTA	GATGAGGAGC	GGCCGAGGCG	12360
CGGTCTTCTG	TGACCGGGAC	CACGCCGTAC	GACATAGAAA	ACCAGATGCA	AGTAGAGTAT	12420
CAGAAACACT	CCCGCAGAAA	GGACGCGCGG	GTGAACGATT	ACCGCGCCTA	TAAGACTCCA	12480
CAGGTGCACC	CTTTCCATGG	CGGATCCCTC	GGCATGTGTG	TTTCGTTTCCT	TAAGGATACC	12540
TGGGCACAAA	CCCTTGACGT	GGTGCGCAAA	ATGCTCGACC	ATGTGCCCCG	GCGTGCCGTG	12600
CGGCAGTGTC	TCGTCCCCGT	GTGCATTTTG	TACCATAAGT	TTCAAGGAGGA	AATGTCCTAT	12660
GCAGCAGCGC	TTCTTCTTAC	TCGGTGTCTG	CGCTTTTGCT	TTTGGCGTCC	CGGTTTTTCC	12720
CCAGCAGGGC	ACAGATCCAA	GTGTGGGTGC	TCAGGCCAGT	GCGGGCGACG	GAGGCATGAT	12780

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gAGCaGGGGG CATGATTCAA AGGTGCTCGC GCTCCAGTAT ATCCAGGAGG CACTTGAAGG 12900
CGGACGTGGT TCTGATGACC TCCAGGAGGC GCTAAGTCGG TTGGCCACTG CTGGATTGTT 12960
CCGCGTGATC CGTGAGCAAG GCGGTGTGAT TAATGATTTC CCCGACATCC GCCTGCGTGC 13020
TTGCGAGCTA CTCGCCCCGT TTCTTCGGCT CGTACCAAGG ACGCTCTCAT CCAAGTCATG 13080
TGTGCTGACC GTGAGCTTCG GTGGTGAGGG CGGCGGTTAA GTCGTTAGGA GAGGTGGGTA 13140
TCAACGAGCA GGACGAGACA ACCGCCACTA TTGGCTGGAT TAGTCGGAAG TTTTCCGCTA 13200
TTAACCCGac AGGTTCTCTC GCGCTTGAGA TTTTGAACAC GTACGAGCGC CTTGCTC 13257

(2) INFORMATION FOR SEQ ID NO: 30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14512 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

AGTTTCCCGA GTGGTCAAAG GGAGCAGACT GTAAATCTGT TGGCGTTGTC TTCCAAGGTT 60
CGAATCCTTG ACTCCCCACT TTCGTCTTCC GTTTGCTTTT GGGTAGTGTC TGAATTGTCT 120
TTCCCTGGCG TTTCTGTCCA GCGGTTTTTG CTAGCTGCTG TGCCTCTTGT CACTTTCTTG 180
AGTGCAGGAT GTTCTTTTCG TGCCTGTGCG CGCGGTTGCG GAAGGATTTT AGTGGCGGAG 240
GAGGGGACGT GCGTGTGCAC TTCTGGGGGG TCGGGGGGTC TGTGCCTACT CCTGTGACAC 300
CTCGACAGGT CcAGTCAAAG ATAGCgGCTG TCGTTCaGCG CATAAGTGCa AAGGATGTCA 360
GGAATCAGAG ATCCAAGGAG CGTTTTATTT CTGATCTGCC TGCCTGGCTC TTTGGGACTA 420
CGGGTGGGAA TACTACGTGC GTGGAGATGG AGACTGATTG CGGGGAAACC CTCATCTTTG 480
ACGCAGGGAC AGGCATTTCGT GATCTGGGTA TCGATCTTAT GAGCCGTCCA GGCTACAGGG 540
CGCAGGGGCA TGTATACCAC CTCCTGTTTA CGCATTTTCA TTGGGATCAC ATCCAGGGGC 600
TACCCTTTTT CAATCCTGCC TTTGATCCTC GTAATACCAT TATCGTCTAT AGCACTCGCA 660
AGAAAATGAA GGAATTCCTT GAAGATCAGA TGAGGTATCC TTACTTTCCA ATATCTATGT 720
TTGGACGCGA CGGTTTTAAC GCAAAGTTTG AATTTGCGCT GATAGGTAAC CATGAGGAGT 780
GCTTTGCTAT TGGGAAGACG AAGATAACTT GGAACCGGGT GCGTCATCCA GGCGGATGTG 840
TATCGTATGC GGTGAGCGAG GCTGGTGGA AGAAGGTGAT TTTTCTACC GACACCGAGT 900

TACGGCAGAA GGATTTTGAT AGAAGTGAGC GTAATGTCTG CTTTACGAT GCCGCAAGTC 960
TGCTCATAAT TGATTCGCAG TACACCATGA CTGAATCCAT CAAAAAGAA GGGTGGGGCC 1020
ACTCCACGTT CTCTATAGTG GTTGATTTTG CAGTAAGTTG GGGGGTGAGA AGACTGGCGC 1080
TGTTCCACCA TGAACCTACG TATGATGATA AAAAGTTGTT TAGCATTTTG CAGAATGCCT 1140
GCTGGTATCG CAAGTACGTT GGTGCGCACG ATCTTGAAAT ACTGCTCGCA CAGGAAGGAA 1200
AGGATATCTT TGTATGAGTG AGGAGGAGCG CATGTATAGC TTTAGCGGtG AAGAAATCAA 1260
GGAACTCGCG CTTCGTGTTT GTCGGTGTGG GCAGACATTG GCGCCGGCGC TCGCCCGTCT 1320
TGCCTGTGTT GTCGATCGCA CTGTTTGTGCG CCATATGACG GTTGAGGAGG CTGAGGATTT 1380
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CGTTCGGCTG AGGCGCATTG TTCTCTGGGG CAGTTTGTTT TGTGCGGGTG TTCTTTGTCT 1500
GCTGTGTCTG TGCTTTTtAG TTGGCCTTGC CCCGGTGCCT CCTTTGTGA AAAAGGAGCA 1560
TATGTTCACT GTGCAGTCCG GTGTGGGCGC GCGGAAGGTC ATTCACGAAC TGAGGAACGC 1620
ACGGCTCATT CGATCCGAGT GGGCTGCGCG gTTGTACGTG TTCGCGCGCG CGCTTAATTT 1680
TAAGCGGGT ActACGCAGT TTCTCCTGCA ATGAGTGCGG TGCGCATTTT AACTATGCTc 1740
GACGATGTCG AACACAACG CTTTATCAAG GTCACCGTCC CCGAGGGACT GACGGTAAAG 1800
AAAATGCTG CACTGTTGCA AGACGCTACA GTGGTAAGTG CAGCGCGGTT TGTGGAAGCT 1860
TGCACGAGCG CTGCATTGCG AACGCGCTAT AAGATCCCTG CTCCTTCAGT GGAGGGTTTT 1920
CTCTATCCTG ATACGTATTT TTTTAGTTAC CAGGAACGCG CGGCCAATGT GGTGGGAACC 1980
ATGATCGAAA ACTTTCTGGC CAAGACTAGC CAGTTGCCGT CGTTTCCTGG TGATCCGGTT 2040
GCGCGATTTA AAACCGTCAT ACTCGCTTCA ATCGTGGAAC GCGAGTAcCG CGTGGCTTCT 2100
GAGGCAGCAC GCATCGCAGG TGTTTTTTAT AACC GGATGA AGGTAAACAT GGGACTGCAA 2160
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CCCCCAGCTC CTATCTCAA TCCTGGGCTC ACCGCGTTGA ATGCTGCGCT GCATCCTGAA 2340
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AGACGTTGGA CGAGCATGAT CAAGCTGGGC TCATGCTGCT AAAGAAAAAT ACGGGAATGT 2460
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GTCCATTTCA TCATGAGCGT ACGCCTTCGT TTCATGTGGT GCCGATAAA AAGATGTACT 2640

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GCGCGCGTAC	CTAGCCTCGC	GCAaGGTAAC	GGATGATTCA	LACGCACtTT	AAGCTCGGGT	2940
aCGTCCGCCG	GATCCGGTAT	GGTTGTTTCA	ATTTTTTAAGG	CACAAGGGAT	ACTCCCCCGA	3000
GTTTCTGGCC	CGTTCTGGGT	TGTTTGCAAA	AAAAAGCGAG	CGTATCGCCG	TTTTTTCAGA	3060
TCGGATCATG	TATCCGATTG	CCGACCGCTA	CGGTCAGGTT	ATCGCATTCG	GAGCGCGCGC	3120
CTTGGGGACT	GCACCTGCAA	AGTATTTGAA	CACGGCAGAT	ATGCCACAGT	ATAAAAAGGG	3180
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GcGCcTTTAG	GCGCATTGCT	GACGAAAAGC	CAGGCACGTT	TGATGCGTTC	GTTTGTTCGAT	3360
CGAATATATA	TGTGTTTTGA	TGCCGACGGA	GCAGGCAGAG	CGGCAACGTA	CAAGGCGATT	3420
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CCTGCAGAA	GTGCGTGTAT	AGAAGGAGAG	GACGCTTTGA	GAAAAAGCGT	AGAACGGAGC	3540
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GATGACACAT	CACGTGCGGT	GTCCTTTTTA	TTCCCTTATC	TGAGTGTCTT	GGACTCTGCC	3660
ATTCAGCGTG	AGCAAGTCAT	GCAGGATATT	GCGATGGCGT	TTGGCATTCG	CATACAGGCG	3720
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TGTGTTCTGT	CTGTACAGGG	AACAGCGATA	CAGGTGAAGG	AGCCTGCTAC	GGGAGTACGC	3840
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CGGGAGAGTG	TGTGTGCAGA	TGACTTTGAA	GATCCTATGG	CAAAAGAGTT	ATTCATAATC	3960
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ACCGACGAGT	TAAGGAAACT	CGTGAGCGAG	GCAATTGTCT	GTGGTGAGTT	CTCTTGCAAT	4080
GCGCCGCAGA	TTGTGCGTGA	CGGTGTTGCG	CTCGTGCGTC	GTAATAGACT	GCTGAAGGAG	4140
CGAGAATCGC	TCGTAGGgCG	GCTGCGCCGA	TTTGGGGATG	CATCTTCGGG	TGAGGAGTGC	4200
GGGTCTATGC	AGGAGCTTAT	GATGGAAAAG	CAGCGGGTTG	ATGAGGAGTT	AGAAAGGTTG	4260
AAAGGGGTGA	GGAAATGATG	GAGCTGTCAC	GTACTCCTGC	GGTGATGCGC	CTGTTAGAAT	4320
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ATGGACAACA	TTAGCACGCA	GCGGGAGTAC	GATGCGCTCG	ATAGGGAGAT	TCAGGAGGCG	6420
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CAGGAGGAAG	AGCGGCGTCT	TTCTCCAGAT	CTTGACCGGG	ATGTACTCTT	TAAGTTTGAG	6660
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TTCTCTTGAC	CCCGTTT	ACCTTTTCCG	TTTGAATAC	GTTTTTATCC	TCGACCTGTC	10140
CTTGTCCTT	GAAGGACCGC	ACGGATGATA	CGGCTCATCG	CCTGGTCTGT	AGGTACCTCT	10200
TTTCTTTT	GCATGTAGA	GATGGCAGTG	TTCGTACACG	TTTCGTA	ATCCATTATG	10260
CCAGATCTCG	TCTTGCTCGT	AGTACTGTTC	ACGAGCATT	ACAATGGCGT	GGTGGCAGGG	10320
ATATGGACTG	GATTTATG	AGGAATTATT	TTTGACTTCC	TTTCTATCTC	TCCCTTTGGT	10380
TTGCATTCGT	TCGTTTTAC	CACTATAGGC	TTTATGGTAG	GAAAGGTGCA	GGGaAGATAT	10440
CATATCGaTA	GAGTATTCGC	CCCCGCGGTA	CTGGCAGGCT	TTGCAATGAT	TTTCAAGGTG	10500
GGATTGGTGT	TGGTATTGCG	AGGAGTGTTT	GGTCCAAATA	TCCAAGTGTA	TAGCGTGTTT	10560
TCACGcAGCT	TTGGATAGAA	ATGACGTTGA	ATATTGTGTT	TGTCCCTTT	GTATTCGGGC	10620
TTTTGAATAT	GTTTCCGACC	ACTTTTCTTT	ATAAGAGGTT	TTCTTCGTAG	ATGCGTTATT	10680
TTTCTCTCCT	TCCTGATCGT	CATATGCTTT	TTAGGATAAA	GGTTCTCACC	TGGCTCGTCG	10740
TGcTGTTAT	GCTGTGTAC	ATGCGGCAGC	TGTTTGTGTCAT	TCAAATCGTG	CGGGGGGATT	10800
CGTTCAAAAA	AAAATCGCTG	AACATATCTC	AGCGTAgtAA	AGTAATTCCT	GCACAACGGG	10860
GGGAGATTTT	TGATCGCCAC	GCGGaTCTGC	CCATGGTGCT	GAATGTCAAT	TCGTTTGACG	10920
TTGATATGAT	CCCCGGAGAG	GTTCCGCCTG	AGCAGTTCGA	TACGGTGCTC	AACAAATTGT	10980
CGCATATTCT	GCGCGTACCT	ATTTCCGATA	TTGAAAGAA	AATTCCTGAT	GCGGTCCGCC	11040
GTTCAATTCA	AACGGTGGAG	TTGCGCAGTA	ACGTGAGTTA	CGAGGACATC	ACTGcTATCG	11100
CCCAAATAAT	TGATGAACTG	CCGGGCGTPT	CTTGGTATTC	AAAACCAGTA	CGAAATTACG	11160
TTGAAACAGG	ATCATTCGCT	CACGTTATCG	GATATGTGGG	GGAGATTACA	AAAGAAGAGC	11220
TCAAACGATT	TTACAGTAAA	GGGTACAGGC	CCAACAGTCT	CATTGGAAAG	GCTGGAATTG	11280
AAAAAGAATA	CGACGAGGTC	CTGAGAGGGA	AAGAGGGACA	CGAGTACCGG	ACCGTCGATG	11340

CCCGTGGGCG	ATACATAGAA	AACACTTCGG	TTACTAACCC	TCCTCGCATG	GGTAATAACC	11400
TCGTGCTCAC	CATCGATCGG	CGTATACAAA	AACTTGCGA	AGACGCGCTC	GGTCCTCGTA	11460
TCGGAGCGGC	AGTGGTACTG	AAACCGACAA	CGGGAGAAGT	ACTTGCTATG	GTATCTTATC	11520
CGTACTTTGA	CCAAAACATT	TTCACCTCAGC	ATAACGCCCA	CGAACTGTAT	GCGCAGyTTT	11580
CACATGATAC	ACGGTTCCCT	CTGCTTAACC	GTGTTGTGAA	TGCAAGTTAC	CCGCCTGCGT	11640
CGACGTTCAA	GATkGTCaTG	TCAACCGCTA	TTTTGGCAGA	GAAGGCATTc	CCCCATGAAA	11700
AGACGGTGGG	CTGTCCAGGA	GAGATCGAGT	ATGGCAATCG	CTTATTTTCG	TGTCATATCA	11760
GAAAGCCTGG	GCACGGCAAG	GTAGATCTCC	GTCGTGCGCT	TGAGCAGTCG	TGTGATATTT	11820
ATTACTGGAC	AGTCTGTCTG	GACTATCTTG	GCATCGACCG	CATGATTTTC	TACATCAACG	11880
ATTTTGGATT	TGGCAAATCG	GCGCGCATCG	ATTTACCCAG	TCAAACAGAG	GgTATGGTTC	11940
CAACACCGAA	ATGGAAGAA	CGTCGGTTTC	ATGAAAAATG	GTTGGATGGA	GACACTATGA	12000
ATCTCGCTAT	CGGGCAGGGT	TACATGCTTG	TCTCGCCTCT	GcAGGTGGCA	AACATGGTTC	12060
CGATGACCGT	TAACAATGGC	GTCATTTATC	GGCCCCATTT	ACTCAAGGAA	ATTCGGGACT	12120
CTCGTACTAA	CGAATGCTAT	TTAGGCATAA	ACCTGAGGTA	TTAAAGACAG	CAAAAATTCC	12180
TGCAGAGATA	TTCGAGCACG	TGCGCGCAGA	TATGCATTTC	GTTGTCACGC	GTGGCTCCTC	12240
CCAGTATGCA	ATGAAAAATA	AGACCGTGTC	CCTGGCAGGG	AAAACCTGGTA	CTGCAGAAGT	12300
AGGTTTTTAC	AATCGGTGGC	ATTCGTGGAT	GGCAGCGTAT	GGGCCTTATC	ATCGCCCCCC	12360
GGATGAAGCG	GTGGTCGTTG	TGGTACTGGT	AGAGGCAAGA	AACGAATGGG	AATGGTGGGC	12420
GCCGTTTGCA	ACCAATATCA	TTTTtCAGGG	TATTTTTGCG	AATGAGGATT	ATGAGCAAGC	12480
AGTTGAGTCG	CTCAAGTCGT	ACGGCATTTC	CCTTGGGGTG	CCGGCAAGGA	GTCGGCAGGA	12540
ATGAGGATTC	GCGGTGTCAG	TGATTTtGAC	TACCTATTGC	TTCTGACCAT	GctGGCGTTG	12600
ACCArCATTG	GTATCTTGTT	CATCTATTCT	TCCGGGGTAA	ATTCAGAGGG	ACACGTTATT	12660
TCCAGAGAAT	ACCTAAAACA	AATAGTGTGG	GCCGTCATGG	GTGTGGTGCT	CATGCTTTCT	12720
GTGAGCATGT	ACGACTACCA	CAGGTTCAAG	GATAGAACAA	CGCTTATTTT	TGCAGGTTTT	12780
ATATTGCTGC	TGATATACAC	GCGGTTGTTT	GGGCGGTATG	TAAATGGTGC	AAAAAGCTGG	12840
ATCGGTGTGG	GAGAATTCGG	CATTCAGATT	TCTGAGTTTG	CAAAGATCGC	GTACATATTA	12900
TACTTAGCGC	ACTATCTTGT	TTATTCTCAG	AGTGAGCCTA	TGCTTAAGCG	CTTTGCGAAA	12960
GCGGGGGTGA	TTACCTTGCT	GCCCATGGCG	CTCATATTGT	CTCAGCCGGA	TCTCGGCACT	13020
GCATCCGTGT	ACCTGCCGAT	TTTTCTCGTT	ATGTGTTTTA	TTGCAGGATT	TCCTCTCCGT	13080

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TTGATTTTCG CGGTGGTTTG TGTGGTCCTC CTGACTTTGC TCTTTACACT GTTGCCCCTT 13140
TGGGAGCAAA CCTTTTTCGA ATACCAGGGG GTGGCTACGC GCATTGCAGA TTCGCGTATG 13200
CTGTCGCTGT TTGTGTTTTT TTCTCTCAGC GCTACGTCTG CGGTAgcGGT GGTAGGGTAC 13260
CTGCTCTCTG GAAGAAAATA CTA CTACTACTGG ATTACTTACG CTTTGGAAT GGTGAGTATT 13320
TCTTATGGCG CATCGCTGCT GGGAGTTCGG GTTTTAAAC CGTATCAGAT GATGCGCCTG 13380
ATCATTTTTC TCAATCCCGA GGTAGATCCA CTCAAAGCGG GATGGCACAT TATCCAGTCA 13440
ATGATCGCTA TTGGCAGTGG CGGTGCGTTT GGAATGGGGT ACTTGAGAGG ACCGCAGAGC 13500
CATTATCGAT TTTTACCGCA GCAGAGTACT GATTTTATCT TCAGCATTCT TTCTGAAGAG 13560
TGGGGTTTTG TTGGCGGGGT GATAGTGTTC GGTGTGTATC TGTGTTCTT TCTGCATACG 13620
CTTTCCATCA TGAGTCACGT TGATGATTG TACGGTAAGC TCATCGCAAG CGGTGTGTTG 13680
GGTATGTTCC TTTTTCACCT TGTAGTTAAC GTGGGCATGA CCATGGGAAT CATGCCCAT 13740
ACGGGTATTC CTCTGTTGCT CCTTTCGTAT GGTGGATCGT CTCTGTGGAC CGCGATGATT 13800
GCAACGGGAC TCTTGATGAG TATCAATGCA AGGCAGTTGT AAATAGAGTA AGGAAAGGAC 13860
ATTTGGTATG AAGGTGGTTC TCTTTTATGA TCAAGGAAGA GCGCATTCAG TTGCTGCGAT 13920
ATGCGAGGTG CTTTGTGCAC AAGGATGCGC GGTAACACCG CATGCGATTG AGCAGGTGTG 13980
GAACGACACA TCACCGTGCA GTaCgcCTTT GGCnTTGGTA CAGGATGCAA CGCATGTGTT 14040
TTTTTTGTaC gcGCATGAGC CCATGCGCGA TcCGGCTTTT ATTTTCTTTT CTGGAGTTGC 14100
TTGTGGGCGT GGTATGCACG TGCTGCTCTT GGCTACAACA ACGGAGGTCA GGGATATCCA 14160
TGTATTTTCG GACTTGGTCT TTTTACTTGA GGAGGAGACG TTTGAGGATT TCTTTCGTGT 14220
CGAGCACGAG AGATTTGTAA GGCAGAAAAA GAAGCGTGTC GCACGCACTG CGCTGTTAGA 14280
GCGCGGTTAT CCATGTTTTG AAGAAAATTT CATCGCGACA GTCATGGATG GGAATATTGA 14340
TATTGTCAAT CTCTTTTGG ATGCAGGATT TAGCGCTGCG TTGAAAGACG CACGCGGTAC 14400
gCCTGTGTTG TCTTTGGCAG TGCGGGAGGG TCAGGATGAG ATGGCAGCGC AACTTnATTG 14460
nCGGCGGTGC GCCAGTAGAT CCAGTTAATG GGATCCTCTA AGTAGTTAAT TA 14512

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(2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3569 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

CCGCCGCCCG CGTATTTCTC GCATTTCTCG TGGGTTATGC CCGAGAGAGT AGTACAGGAA	60
CATATATCGT GCGGTTATAA GGCTCTCAAG CAGGATCATA TGGAAGTAGA CTGTGATGTC	120
TATGCTTACC GTGGAGGGCG GGTGTTTCCC CGTGTGTCCG GTATGGGGGT TATCGATCAT	180
ACAAACATCC CACATGCTCT GCGTATTTT TGTGAAAAGA TGA CTGATTC TTTTATGAAA	240
AAAAAATAG ATCCACACCT GTGCCAGAGA GAGAGAAAGT TTTTACCCCA TTA CTTTTC	300
TTTCGAATGG GTAAGCTGCC GCGTATTTGC GCAGTTGTGT TTGCTCAACC GAATGTTATG	360
CAGGGTAACT TTCTTACCGT TCATTTTAAA TTAAATGTAG AAAACGAGGA TTCTCGTATC	420
ATAGAAGTCA CGGTGGCGAA AGAGCAGGAG AATTGGAAAC TATTCCAATT TTTATTTAAA	480
GAGGATCGCG CGCATCTTGC TGTCTTGTA GTGATGTCTG AGTCTGTAAA GGAGATGGCC	540
GGAGGATGAA AGGTCAAGAT GTCATCCTGT GCGACGGGGG ACGTCATTTT TCATATAAGG	600
TACTTCCTCG TGTGGTCATT GTGGGAAGAC CGAATGTAGG TAAGTCGACA TTATTCAACC	660
GCCTGCTCGG TAGACGGCGC TCTATCACCA GCAATACGTC AGGGGTTACA AGAGATTGCA	720
TTGAAGAAAC CGTGATTCTG CGAGGGTTTC CTCTTAGACT TGTTGACACG AGCGGTTTTA	780
CCGTTTTTTC TGAAAAAAG GCATCGAGAC AACATATCGA TACTCTCGTG TTAGAACAAA	840
CGTATAAATC AATACAGTGT GCGGACAAAA TCCTTCTTGT GCTTGATGGA ACGTGTGAAA	900
GTGCAGAAGA CGAGGAGGTT ATCCAGTATC TGAGGCCCTA CTGGGGCAA CTCATCGCTG	960
CGGTTAATAA GACGGAGGGA GGAGAGGAGG TGCATTATAA TTATGCACGG TACGgTTTTT	1020
CTACCTTAT CTGTGTCAGC GCCGAGCAG GTAGGAACAT AGACGCGTTG GAAAGGGCGA	1080
TTATCCAAAA TCTGTTTTCT GTCGATGAGC GCCGGGAACT GCCGAAAGAT GATGTTGTTC	1140
GTCTTGCAAT AGTGGGTAAG CCGAACACAG GAAAATCCAC TTTGATGAAT TATCTCATGC	1200
GCCtACCGTT TCTCTGGTGT GTGATAGAGC AGGTACTACC AGAGACGTGG TAACCGGTCA	1260
TGTTGAGTTC AAACAGTACA AATTCATTAT CGCAGATACG GCGGGTATCA GAAAAAGACA	1320
GAAGGTATAT GAGAGTATAG AGTACTACTC GGTAATACGA GCAATTAGCA TCCTGAATGC	1380
CGTTGACATT GTATTGTACA TCGTCGATGC CCGAGATGGA TTTTCTGAAC AAGACAAGAA	1440
GATTGTTTCG CAAATCTCAA AGAGAAATTT AGGTGTGATC TTCTTTTGA ACAAGTGGGA	1500
TTTGTGGAA GGAAGTACCT CTCTAATAGC TAAGAAAAAG CGTGATGTAC GGA CTGCTT	1560
TGGGAAAATG AATTTGTTC CCGTGGTACC TGTATCAGCT AAAACGGGGC ACGGTATTTT	1620
TGATGCATTA CATGTGTAT GTAAGATCTT TGCACAATA AATACAAAAG TGGAGACTTC	1680

CGCTCTCAAT ACTGGCATTG AAAGATTGGG TAACGTCGTA TCCTCCTCCA AGAAAGTATG	1740
GACACGTTTC GTTAAAGTAC CTGGtGCAGG TATCGGTTAG ACCTATTGAA TTTTtGCTTT	1800
TTGCAAATAG GCCAGATCGT ATACCGGAAA ACTACGTTTCG ATTTTtACAG AATCGTATTC	1860
GTGAAGACCT AGGATTAGAC TCTATCCCTG TGAAGCTAAC CATACGGAAA AACTGTTCGGA	1920
AGCGATAGAT GCAAGATGAA GGAGTGGATA TGAAAAAACT TCTTTTACGT TCTTCTGATG	1980
AAGTTCGAGT AATCGCGCCC TCGTGcTCAA TGCCTAAGAT TGATTTCATCG GTAATTGAGC	2040
GTGCACAGGA GCGCTTTTCGA TGTTTGGGTC TCAATGTtGC TTTgGAGATC ACGTGTACGA	2100
CGAGGaTTTT TTAGtTCTGC ATCTGTTGAT AAAAGAGTTG CGGATCTCCA TGCTGCCTTT	2160
GCAGATAAAA AAGTAAAGTT AATcTCACTG CAATTGGAGG ATTTAATTCT AATCAACTAT	2220
TGCAGCACAT AGACTATGCT CTTTTGAAAA AGAATCCtAA GTTGTTGTGT GGTTTTTCTG	2280
ATGTCACTGC GCTATTAAAT GCAATTCATG CGAAGACAGG AATGCCAGTT TTTTATGGTC	2340
CACATTTTTTC GACATTCGGT ATGGAAAAAG GTATTGAGTT TACTATTGAA TGCTTTAAGA	2400
ACACTTTTTT TTATGGTCGG TCGGATATCT TAGCATCCGA AACATGGAGT GATGATATGT	2460
GGTTTAAGGA TCAGGAACAT CGCCAGTTTA TTACTAATCC TGGGTATGAA ATTATCCATA	2520
GAGGAGATAT GGTCGGGATG GGGGTCGGAG GAAATATTAG TACATTTAAT CTTTTAGCAG	2580
GTACGGAATA TGAACCGTCT CTGAAAAAGA GTATTTTGTT TATAGAGGAT ACGTCTCGTA	2640
TGTCAATTAC AGATTTTGAT CGCCACTTAG AAGCACTTAC ACAACGGGAT GATTTTTGTA	2700
CGGTGCGTGG CATtCTCATT GGCAGATTTT AAAAGGATTC AGGTATTGAT ATGGACATGT	2760
TGCGAAAAAT CATTTGAGA AAAAAGGCTC TTGATGCTAT TCCTCTATTT GCAAATGTAG	2820
ATTTCGGGCA TACGACCCCC CATTGCATAT TACCTATTGG GGGAATGATT CGAGTTAATG	2880
TTGATAGAAA ATGTATTACT GTTCAGTTGC ATTCTCAGT TGAGCAACTC CCAGAGTAAT	2940
TTCGGTGAAT GATGTtCTTG CGTTACCATT ACGTATGCTC GCACACTGCC TGAAATGCTC	3000
ATTGGAGAAA TAAAAGAGCC AGTTTCTGTA CTGAAGGGAA CAGGGAAAGT TGTTCTTGCG	3060
CAGTTGGAAA GGCTAAACAT TAGCACTATT GGAGATATCC TTTCGTACTG GCCTCGTTtG	3120
TGGGwwgrkA GAACGCAAGA ACAGATGTTT TCCCAATGGA cgCTGGCGCA TAGATTGCAA	3180
GTACGAGTTA GTGTCACTGC ACATTGCTGG TTTGGATTtG GCAAGAGCAA GACTCTCAAG	3240
CTTGtGGTAC AGGATGGCCA AGGATGCGTC GCTGAATTGT TATGTTTTCG CCGTAATTTT	3300
TTGCATTTTA TGTTTCTGTG TGGAAGTGAA GCAGTCGTGT ATGGAAGTTT TTATGAAAAG	3360
GATGGGTtGC TGGAAAGTAG TTCATTTGAT ATCGAAAAAA TCGATTGTAT TGAAAAAAG	3420

ATTTTGCCTG TCTATCCCTT AACCAAAGGG TTAACAACAA TGAAATTAAG AATGCTCATT	3480
TGTGCAGCAA TGGATCAATG GATTGGCAGG GTTGATTCTG AATTGCCCAA ACCTATTCTT	3540
GAGAAATATC ATCTACTCAC AAAACGAGA	3569

(2) INFORMATION FOR SEQ ID NO: 32:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3858 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

TGCTGAATTC TTCCGCGCGT AATCCTGTCTG CCCATGCTGC CTCTCGCGTT ATTGAGGCTC	60
CGGTAAGTGA GGGAGCGAAG AGTTTGTCTG GTGAGCGTGT CCTTGGTGTG CGCGTGTGTG	120
TCCCCACGTG GGACAGTAAC GCAAACGCAA TGATAAAGCC GGCCTTCGTA ATTCCTGCGT	180
ACGAGGTGAT GGCTCAGGTG GACGATCAGG GTAATGTACA GGCCCCACA GAGGAGGAGA	240
AGGCTTCTGG AAAGGGGCGT TTTGAAGATG GGTACGGAGT GGTAAAGAAT GTGGGTGTTC	300
TTAAGTCCAT CGCGGTGAAC ACTTACGGGA TGAATTATCC TCATGGTTTG TACGTGATGA	360
TGCGGGATCA GGATGGTGAG GTGCATCGCT ACTTCATGGG GTATCTCCTG TTCGACTCCT	420
GGAAGatTGG TGTGGAACAA TCCTTCGTAT ATCTCTGATG TTCGGTCCGG GGAGGTGCGC	480
TTGTATCCCG TGTATCCCGC GTCGACGCCC CACGTCGTGT TTGAAGGCTT TATGGTTACT	540
AGGGACGCGG CTCATGCCGG AGGGGactAT GTTGGTTATT TCAAGGACGT CAAGATTATC	600
TATGATAAGG CGGTGCTGAG TACGGTGCGC GATTTTGC GG ACGAGGACCT GTGGGGTATC	660
CAGGCGCGGC GTGAGGCTGA GCGTAAGAGA GTTGAGGTTG CGCGTTTCGG GCAGCAGCAG	720
GTGCTGCGTT ATATAGAGCA AGAGAAGCTT GCTACAGAGG TTGGTTTAC ACCCTCTGGG	780
GGTGCTCAGC GGCAGGAAGA GCAGCAGTAG TGCAGTAGTC TTCCTAGGGA gAGGGGCGG	840
TGGGGTTCTA GCGCGGGGGC GTGTCTTTTC CCTCTCTTCT TTTCTTGGGT TTTAGCGGTG	900
TTTTGGCGTT CGGGGAGGTC GGATGGGTAG GAGTGTATCC GCCAGGAAGA GGCATGATCA	960
GAGTGAGGTG CGTAGGATGC GTGGTAGGAT GGCTAGGTCT GCGGCGCGTA CTTGTGCGCG	1020
GAGGTATTTG GCTGCTGTTA CATCCGGGGA TAGGGAGAGT TCTCTGCCTC TACTTAGGAG	1080
CTTGGTGAAG CGACTTGACA CCGCTGCCCC GaAAGGTGTT TTCGCTAGAA AGGCTGTGGC	1140
TCGCCAGAAG TCCCGAATGT GTAGACTGTA CAACGGTGTG TTCTCTTCac CCGAGGTGGT	1200

GCGCGTTTGA	GGCGGCTGTT	TGCCCCGCGTG	TGTTTCTTGT	CGTGAAGAGA	GTTAGGAGAA	1260
CGCGGTCTTT	CGTTGTCGAT	GCACTTTGTG	ACGAGgTGA	TTTGAGCCGT	CGCCATGTCG	1320
CGAGGGTTGT	TGATAGCTTT	GTETCTGTGG	TAACCGCTGC	ATTGGAACGG	GGGAGACAG	1380
TCGAGCTGAg	GGATTTtGGG	GTGTTTGAaG	TCTCGCGTGC	GTAAGGCTTC	CGTCGGAAG	1440
AGCATAAAGA	CAGGGGAgGT	GGTCTCTATT	CCAAGTCATT	GTGTGGTAGT	GTTCCGCCCC	1500
AGCAAGCGTT	TAAAGAGTGC	GGTGCGGGGA	TATCGTTCGG	GGGAGGTTGG	TGCGGATTGA	1560
GGAATGGTGT	CGTTCCCGTC	TGGGCGAGTT	TTTGTTGTTT	GTCTGGCGG	TTTCCCTGTT	1620
CGCGCTCTCT	CACCCTAACC	CTCTGCTTCC	CAGAGGGTGT	GCTCTCCTAG	CGTATGGGGC	1680
GCTTGCTCCT	CTCTTCTTT	TGGTAAGGTG	GGCCTCGGGT	TTTGCGGTTG	TGTTCTGGGG	1740
GGGTGCGTAC	GGCGCGTTCA	GCTACGGTGC	GTTTTCTTAT	TGGCTTTTTG	TATTTTCATCC	1800
GGTGGCGTTG	TGCGTAGTTG	CCGGCTTCTC	TGCGCTTTTT	CTTGCGGCGC	TGTGTCTTGC	1860
GCTGAAGGCT	GGTGGTGCAT	TTTGGCAGCG	GCGGGCGCTT	CTCGTGCAGT	GTCTTGTGTG	1920
GCTTGGGTAT	GAGTACGCGA	AGACGCTTGG	TTTTCTTGGT	TTCCCTTACG	GGGTATGGG	1980
TTATTTCGCA	TGGCGTGAC	TGCCGCTTAT	CCAAGTTGCA	TCGGTCTTCG	GTGTGTGGGT	2040
TGTTTCTGCA	TTGGTGGTTT	TTCTTTCAGC	GTGGCTCGCA	TCTGTCTCTG	GGCAGTGGGT	2100
TGAGGAAAGT	GAAAGGAATG	CTCGGGCGTT	TTTGTCTGCC	GCGTATAGCC	ACTGGGTTTC	2160
GGCGCTGGTG	TGGGTGGTC	TGTGTGGGTT	TTGTGTATGC	GCGGCCAAGG	CGGGATGGTG	2220
GCCGGATTGC	ACAGCTCACA	CGCGGGCAAA	GGTTGCGCTC	GTTTCAGCCTA	ATGGTGATCC	2280
GCGACGCGGC	GGTATCGAGT	CATATCGGGC	GGATTTTAGC	ACACTGACGT	ATCTTTCTGA	2340
TTGGGCGCTT	GAGCGGTATC	CAGATGTTGA	TTTGGTGGTG	TGGCCGGAGA	CGGCTTTTGT	2400
TCCTCGCATC	GA CTGGCACT	ATCGCTACCG	GCACGAACAG	CAGTCATTTC	AGTTAGTATG	2460
CGATTTGCTG	GA CTACGTGA	ACGCCAAGAA	CTGCCCCGTTT	ATTATCGGTA	GTGACGACGC	2520
ATATAAGAAG	CGCACGAAGG	AGGGGAATtG	GGAACGTGTT	GATTACAATG	CGGCGCTTCT	2580
TTTCATTCCCT	GGGGTGAACG	TGCTTCCGCC	GAGTCCGCAG	CGGTACCATA	AGATAAAGCT	2640
TGTTCCCTTT	ACGGAGTACT	TTCCGTACAA	GCGGGTATTT	CCCTGGTTTT	ACAACTTCTT	2700
GGAAAAGCAG	GATGCGCGCT	TTTGGGCCCA	GGGGAGTGAA	TTCGTTGTGT	TTGAGGCACG	2760
AGGGTTAAAG	TTTTCTGTCC	CGATTTGTTT	CGAGGATGCG	TTTGGGTACA	TCACGCGTGA	2820
GTCTGTGCG	CGTGGTGCCT	CTTTGCTCGT	CAATATTTCT	AACGACAGTT	GGGCAAAGAG	2880
TCTTTCTGT	CAGTATCAGC	ACCTGAGTAT	GGCGGTGTTT	CGCGCAATCG	AAAACAGGAG	2940

GGCACTGGTG CGTGCAAGTA CGTCTGGCCA GACGGTTGCA ATTGCGCCTG ACGGGCGTAT 3000
ACTCGATGAA CTACAGCCCT TTGCCCCGGG AGTTTGGTG GCGGACGTTT CGATTGTCAC 3060
ATGCGCATGC GGAGGCTACC GGTATTGGGG GGACGCGTTG GGAGTCTTTT TTTGTGTGGC 3120
GTCCCTTTTT ATATTGATTG CTGGTGGTGT GCGCCATATG CTGAGATGCA GGAGGGGCGG 3180
GTGGCGTTGA AACGGGTTAG CGAAGGGCAT GGCAAGACTG TTCTGGGTGC GAAGACGGTG 3240
TTCGACGGGG TATTGCGATT CAAAGGTAAC CTGCACATCA GGGGAAAGTT CTCCGGTGCT 3300
ATCGATGCGC AGGGCTGTTT GACCATTGCG CCGGGTGCGG TGTGTGCAGT TCAGTACGCG 3360
CGTGCTGTTT CTATTTTGTG TGAGGGGGAA GTGAGAGGGA ATCTGACGGT GGTTGATCGT 3420
GTGGAGATGA GGGATGGAAG CCGAGTGTTC GGGGaTGTCa CTGCTTCTAG AATTAaaATC 3480
TGTGATGGAg TTACGTTTGA GGGGTCTGTT TGCATgACTC GGGaAGGGaA TGTTCGAAG 3540
CGGGATCTAT TTTCTGTCCA GTCTGAGCAA TTGAAGGAGC ATCTGCGTCG TTAGCGTAGA 3600
TATGGTTGGG TCTTGACTGA ATGCCtAAAA GAGGCGCCAC AGTTCCTGTA TACACCACGT 3660
GAAGTTAAGG GTGTCGTCTT CTGTTTTCCT GGTGTTCAG TCTTTAGCCA ATTTAGGTGA 3720
GAGTGTTCCT GGGCGTGAC TCGTTGGACG TCGGTTTTTC TTTCCAGGGT TGTAGCGTGC 3780
ACGGTGCTGC GTGCTGTTCA AACCGGTGTC GGTAACTCTG GTGTGTAAGT TATGAAAGTT 3840
TCTGTTGGTA CCGTCGTC 3858

(2) INFORMATION FOR SEQ ID NO: 33:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 878 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

TCACCATATG GAAATCGCGG TTTAGGAATC ATCAATATTA CACAGCTgtA CGGGGTCGGT 60
TCTATCAGGG AGCGGAAAGA AATACAAATG GTGGTTCAAC TTGAAGAGTG GAATTCTTCA 120
AAGGCCTATG ATCGTCTCGG TACGCAGGAG CTGAACACTA CTATTTTGGa CGTCAGTGTT 180
CCCCTTATAG AAATACCGGT AAGGCCCGGA AGGAACATCC CCATCATCCT GGAGACAGCT 240
GCTATGAACG AGCGTTTAAA GCGTATGGGC TATTTTTCTG CAAAGGAATT CAATCAGAGC 300
GTACTCAAAT TGATGGAGCA GAATGCAGCA CATGCACCGT ATTATCGGCC AGATGATACG 360
TACTAGGGGG CTAAAAAACG TCGGGTGAT GCGGGTGGAA GGAAAGCATA ATGGTCGTAA 420

AAACGGTGCG CGTGCTTAAT CGTGGGGCG TACATGCGCG TCCTGCGGCG CTTATTGTGC	480
AAGCGCAAG TCGCTTTGAT TCGAAGATAA TGCTTGTGCG GGATACGATC AGAGTGAATG	540
CAAAGTCTAT TATGGGTGTT ATGGCTATGG CTGCAGGGTG TGGAAGTGAG CTCGAGTTGG	600
TTGTAGAAGG TCCAGACGAA gTTGCTGCAT TGTCGCCCAT TGAGCGGCTA TTTCAGAATA	660
AATTCGAGGA AGAGTAAATA CGCTCTTACG TGTTAGAACG CCTGTGTTTG TGCTCTTTGC	720
GTGATAGGGG TACTGTACAC TGAGATAGGG AAGGGGCGA AGGGATGTCC GTCTGGCTTT	780
TTACCGGACC TGAAATAGGG GAGCGAGATA GTGCAGTTCA GGAGGTGTGC GCGCGTGCAC	840
AAGCGCAAGG GACGGTGGAC GTACATCGGC TCTATGnG	878

(2) INFORMATION FOR SEQ ID NO: 34:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5819 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

TCCAGTCTAT TAATnGTGGC CGGGAAnCTA GAGTAAGTAG TTCGCCAGTT AATAGTTTGC	60
GCAACGTTGT TGCCATTGCT ACAGGCATCG TGGTGTCACG CTCGTCGTTT GGTATGGCTT	120
CATTAGCTC CGGTTCCCAA CGATCAAGGC GAGTTACATG ATCCCCCATG TTGTGCAAAA	180
AAGCGGTTAG CTCCTTCGGT CCTCCGATCG TTGTCAGAAG TACAGGATCA CTCGCAGGCA	240
ACATTTTGTG GnAAGCTCTG TAGGGAGATG GGATTGGCGG ACTGGAGTAA TCCTGCAGTT	300
GTGTTGGAGC GCAAGATTCTG GGCCTTTACT CCCTGGCCGG GTCTATTACAC CTATAAAGAT	360
GGGGAAGGA TAGCGATTTT GCAGGCGAGG TCGTGTGAGT CTTGTTTGT TCCCCTCGCT	420
CCTGTGGGA CAGTGCTTGC TGCAGATAAA AATGGGGTGT TTGTCCAGAC AGGCGATGGA	480
GTTCTGTCCC TTTTACAGTT GCAGCGCTCC GGGAAAAAAC CTCTGTTTTG GAGAGATTTC	540
CTCAATGGTT CCCCTCTATT GCTGACAGGT AGGTTAGGGG TGTGAGTGAT ACACGCCAGG	600
CGTGAGATTT CTACGCAACG CATGATGCGT ACCCCAAGTG TGTCTTGTTA CAGAGAAAGG	660
GGAGGTTGGT TTGTCCGAAG AAATTCTCAC GATAGAAGAG GTTGC GCGGT ACCTGCGAAT	720
TTCTGAACGT ACCGTGTATG AGTGGGCGCA AAAGGGGAAG ATTCCGTCAG gAAAAGTGGG	780
CACCGTGTGG CGGTTTCGCA GGTGAGAAGT TGAGCGATGG GTTGACACTT GTCTTTCCTG	840
TTCTCACAGA CAGAGCCATT CGGATGTTTT GCCCATTGAG CGGATCCTGT CCACCGATCG	900

TATCCTGCAT CTTGAACAGT CTGAGCGTCG TCCGGCGCTC TATGAGCTTT CTGATTGCTT 960
GAGCACTGCA CCTCAGATTA AAAATCGTAG CGAGCTTGCG GCAGAAATAG TGCGGCGCGA 1020
GGAGCTCATG TCGACTGCAA TTGGGTGTGG TATTGCAGTT CCTCATGTGC GCTTGTCTTC 1080
TGTAAGTATG TTGGTTATGG CGGTAGGAAT TTCAAAAAA GGTATTGCTG ATTTCCGGTCC 1140
TCTTGACGGA CAAGACGTAC ATCTTGTTTT TATGATTGCC GCTGCTACCA ATCAGCACCG 1200
GTACTATTTG CAAACGCTTT CTTTTTTTAG TTCAAAATTG AAAAGGCCCG ATTTGCGGAC 1260
GCGCCTCTTG CAGACTAACA CCGCGCTAGA AGCGTACACC GTGTTGACAG AGCAGTCTAG 1320
TTTGTAAGAT TTAGAAGAGA GCAGGATTGT TCAGGCAGAG GGAAAGCATT GACCTATTTT 1380
TTTGAAACGT ACGGGTGCCA GATGAATGTT GCAGAGTCTG CTTCTGTAGA GCAGCTCCTG 1440
TTGGCGCGGG GGTGGACAAA GCGGGTAGAC GCGCAGACGT GCGACGTGCT GATTATCAAT 1500
ACGTGTTCTG TGCGAATTAC AGCAGAAACG CGGGTCTTTG GGAGACTTGG CTTATTTTCT 1560
TCTCTTAAAA AAAAGCGTGC GTTTTTCATT ATCCTTATGG GGTGTATGGC ACAGCGTTTA 1620
CACGACAAAA TTCAGCAGCA GTTTCCTCGT ATTGATTATG TAGTGGGTAC GTTTGCGCAC 1680
GCGCGATTTG AATCCATTTT CCAAGAAATT GAACAGAAGC TTACCCAGAA AGATTACCGC 1740
TTTGAGTTTA TCTCCGAGCG TTACCGGGAG CATCCTGTCT CTGGGTATCG TTTTTTCGCT 1800
TCTTCATATA GCGAAGGTTT ATTCCAAAGT TTTATCCCCA TCATGAATGG CTGCAATAAT 1860
TTTTGTTCGT TTGTCATTGT GCCATACGTG CGTGGACGGG AGATCTCGCG TGATCTTGAT 1920
GCTATTTTGC AGGAAGTGGA TGTGCTCTCT GAGAAAGGAG TGCGGGAAAT TACGTTGCTC 1980
GGACAAAATG TTAATTCGTA TCGGGGAAGA GACCGTGAAG GgAACATAGT TACCTTTCCC 2040
CAGCTGTTGC GTCATTTGGT TCGTCGTTGC GAAgTCAAAG ATCAGATAAA GTGGATCCGC 2100
TTTGTTTCCA GTCACCCTAA AGACCTTTCT GATGATCTGA TTGCTACTAT TGCTCAGGAA 2160
TCTCGTCTGT GTCGTCTGGT GCATTTGCCA GTGCAGCATG GGGCGAATGG AGTGCTCAAG 2220
CGGATGCGAA CGGAGTTACA CGAGAGAGCA GTATCTGTCT CTGGTGGGTA AACTGAAAGC 2280
GAGTGTCCTT AATGTGGCGC TGAGCACAGA TATTCTTATT GGGTTCCCGG GGGAGACGGA 2340
GGAGGATTTT GAGCAAACGC TGGATCTCAT GCGGGAGGTG GAGTTTGATT CCGCTTTTAT 2400
GTATCACTAT AACCCGCGCG AGGGAACGCC TGCCTATGAC TTTCCCGATC GTATCCCTGA 2460
TGCAACGCGG ATTGCGCGTC TACAACGCGT CATTGCTCTG CAGATGAGTA CTACTTTGAA 2520
AAAGATGCGC GCACGGGTAG GAAAGACATT GCCAGTGTG GTAGAGTCGC GCTCGCGAAA 2580
TAATCCTGAA GAATTGTTTG GACATACAGA GCTTGGGGAA ATGACCGTGC TTGAAGGAAA 2640

GGTGGATCCT	ACGTACATCG	GACGCTTTGT	GGACGTGCAA	GTGAAGGAAG	TGCGCGGCAG	2700
GACCTTGCGT	GCCCATCTGG	TGCAGGAGCG	TGCAAAATGA	CATATGGAAA	GCTGATTTTT	2760
TTTATTATCG	TACTTGTTGG	TTTCGCGCTC	TTTCATGTCCT	TCAACGTGGA	ACACCGCTGC	2820
GATGTATCGC	TTGTCTTTTA	TACCTTCAGG	CAGTGCCGAT	CACTTTGAGC	TTGCTTTTTG	2880
CCTTTGCGTG	CGGTGCGCTT	ACGGCGTTGC	TTTTTCTTAT	TGATCCGGAC	GCGAAAACAA	2940
GAAAACAGAA	ACGTGAAGAC	AGTCCTACCT	CTGCTCCTAC	AGGCGGCGTT	TCTTCTCCGG	3000
AGCATGTGGA	CGTTCCCTAG	CCAGACTGCA	ATGACACAAA	GTCGCGTCTA	GGGCTCGCAG	3060
GACGGCGCGC	GTGTGCGTGT	TTGGGTTCTC	TGCTTAATGC	GTGCAGTTTT	TGTCCGATAC	3120
ACAGCGCATG	GTGCTGTCGC	GCGCGGTGTG	GCGCTCCTTT	TTCTTCTTCC	ACGTAGCAGT	3180
TGCCCGGTAT	ACGGCGCGTG	TCCAGGAAAT	GGCGATGCGT	GGTTTTCAT	TGCGCAATTT	3240
TCAGCAGGTG	CATGCGTATT	TTGAGCAGCA	TATTCGGTTG	CTTCTTCGT	TTACGGAGAA	3300
AAAGGAAGCG	CTCTCGCTCT	TTGCTCAGTA	TTTAGAATTG	CACGATGCTC	ATGAGCGTGC	3360
GGCACATCGT	TACCGAGATG	CcGGCGTTGT	ATGcCGCTGG	GTA CTGAGCG	CGTGCACTTC	3420
TTACTTGAAr	CTACGCGTAA	tGCAATGGCC	cgCGGATGCG	CGCGAGTATG	CACGGGAAAC	3480
GTTGGCAGAA	GTCGAGCACA	TAGGTGTGCA	GGTGCTAAAC	AAGAAACAGC	ATGCTACGTT	3540
CTTGTTTAT	CACGTGTGGC	TTGCGCTCCA	TGCGGCGTCT	ACGGCCGCGC	ATCTCCATGA	3600
GCAGTTGGAA	AGATTGGAAG	AGTATGGCAC	GCAGGGTGTG	TTCAATGTGT	TTGAGACGGT	3660
GTTGCTGTTT	ACTCGTTGGT	GGATTACTCA	GGATGAGAAG	GTGGCACAGC	GTCTGACAGA	3720
GAGGTATcCG	CAAAGCTTTG	AAGCACTTTC	GGTTATAGGG	GCGGTGGAAA	TAGCGCCGTC	3780
GGTTTTTTGG	CATTTGATGC	GCGGTGCGTA	CGGAGAAGCA	GTTGAATCAA	TGGGAAAATC	3840
TGAGACAGTT	GTCTTGCAGG	ACGCGAAgCT	ACGTCCTGTA	CCCAGGTGG	TGGCAGCGCA	3900
CAGGACCCGT	CGCGCGCACG	TGGCCGCGA	CGGCACGGcT	GCGCGGTCTG	CTATGTCGTC	3960
GTCCCATAA	TTGGGCGTGT	CGATTCTCGA	GGGAGGGGTA	TCTGTGCCCG	ATGAGGTGGG	4020
CGCGGGAGAT	GAGAAGCCAC	GGGGGTACCA	GCTCGGGTTT	TTTCGAGCAA	AGGAAAATGC	4080
GCAACGGCTG	ATGACGATC	TGGAGAGGCG	TGGTTTTGGG	TTCCAGCTGC	ATACGGTCCG	4140
ACGTGCAGAC	GCGGTGTACT	ACCAAGTTTT	TGTGCCGGAG	GATGATTCCG	GCTTTGTTGG	4200
TCACCGACTA	AAAGATGCAG	GATACGAGAC	GTTTCCCCCTA	TTCTAGGGGG	CCGGCACACA	4260
TCGGTGTTTT	AGAATGAGTT	CCTGTATAAG	GTGGTGCATA	AACGCGTGGG	GAAGCTGTGG	4320
ATATGGGGAT	AGCGTGGGGA	AAACCAGGAA	TAAACCCGTG	GAATGCAATT	GCTCAGCAAC	4380

GCATCAGGGC	GAAGGAGCAC	TAGCCGGACC	GGCGTGATAT	CTGGTGATT	GACCGTCCCA	4440
CATCGACGTG	CTGCCAATTT	TGAGCCGTGC	TACGTCTTCA	ACCGCCCTTA	CGTGTATCAC	4500
CTCGTGGGAT	TCAAATGTTA	CCTCAAGGCG	GCGGCGGATG	CTGGAAATTG	CGGTGTTGCG	4560
CGTGAGAAAT	GACACCGTCT	TGCGGTGTGT	GTGCGCGCTA	TCTACCAGGA	AGATTTCTTG	4620
GACTGATGCG	CGTGAGAATG	TGATCTCCGC	GTGTTCTCGG	TCAAAAAACA	GCAGAGGATG	4680
GATATCGCCT	GAGTTCGGGG	AGATTTCACT	TTGTATCCAC	AGTCCTGCCA	AGAGGTGCTG	4740
GAGTGCTCCC	TGTTCAACCAT	GTgTTGCACg	kTTCCAAAGG	GCTATGCGCA	TTGCTGTTTG	4800
TACAGGCGGT	TGTGTGTGTG	TCTGTGCTnC	TCCGCCTACA	GGGGCCGGCG	GGGCGTTTCC	4860
ATGTGACCGT	GGGTCTGTCT	TGGTGGACGA	GCCGGACGTA	TTGTCTGCCG	TGTCAGACGG	4920
GTGTGCGGCG	GTGTCCCGCG	CGTTGCTGGG	AAGTGACGCA	GTGGGTAGAG	CGCCGAAGGT	4980
ATCATGCGGG	GGAATTCTGC	GTGGAGGAAC	GTGACCGTGC	TGAAAGCAGG	AGAAAATATA	5040
TAGAGCCCAC	GCAGCGACGA	ACAACGATCC	GGCCACACTC	AGTAAAGGTC	TATTCACGGG	5100
ACGCTTCCTT	GCACGCAGTA	CGGAGGCACC	AGCCTAGTCA	AGCGAAGGGG	TATAGCGCGG	5160
ACTACTCTCT	TTTGCAGGAG	GAGTAGGGGT	CGGGCGTTTC	GAGTGCGCAG	CTGCGATGCT	5220
GCGATACAGC	TCCCGCGCCG	TGTGGGCAAC	GCGGTCTGTC	ACGGCCATAT	CCAAGGTGAT	5280
TTCGTACCAG	TTGTCTGTGT	TTACGCGTCG	GGCTCTAACA	AGGTAGGGAC	TTTGAAAGGA	5340
ACGCTGTTTG	CCACGGTACT	TTGAGGTGAG	CGGTGCGTCG	TGCTCAAGGT	CGGTAACTAA	5400
CAAGAGAACC	TTGTGTGCGT	TGTGTCTTTT	TCTTTTTTCT	TGTATCTCCC	AGACGGTATC	5460
TAAAGCGCGG	CCGATGTCTG	TGTAGCGACC	GTTTGGGACA	ATGGAATCGA	CAACGGAAAT	5520
AATTTTATCT	CGGTCCTGCT	CAcTGCGTAA	GGTGAGGGTG	ATAAGTTCCT	CAGGCTTTTC	5580
GTAAAACTGG	TAAACGGTTA	TCCAGTCGCC	TTGGATGGTC	ATGGAGGAGA	CGAACTCATC	5640
GCGCACCCAG	CGGTGTAAAC	TGCTGAACTT	TCCTGGTTCT	TGCATGGAGC	GTGATTTATC	5700
TATCATCAGG	AAGATGTCGA	CGGGGACAGT	GCGTTCACTG	CATGCAGGCA	CAGGTGGATG	5760
AGAAAGGTGC	AGAGTGCAGG	ACAAAGCGCT	TTTTTCAGGT	GCATTAGATA	CTCCTTTAT	5819

(2) INFORMATION FOR SEQ ID NO: 35:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25187 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

TGTGGCCTGG CGCGCTGCCT CATCTGCCTG CGCAAGCTTG AGCgCAAGCG TCTCGTTTGT	60
CTGTGCACTT CCTACAGCAG GAGCTTTTGC ATACGCGTGA TCAwTACACG CCAGTAATTG	120
TTGATGCGCA AGCAAATCCA CATAGCGACG CAAAGGACTG GTCACCTGAC TGTACTGAGA	180
cAGCCCGAgT GCTGCGTGCA CCGCGGCGGT TGTGtCACGC GACGAGCTTT CATCGCGCGC	240
CGCTTTTTTGT ACTCCCCCGC CAATCCCGCT GGTAtTGCAC GGGCAGCTGA GGACGTTCCCT	300
GACTCACATA AGGAAAGGCA AGGTTATGTA GAAAGGCAAA CCGTGCTGCC GCTTCTCCCG	360
CTAAGAGCAT GAATTCACGC ACCATGCTCA TAGACTCGTA CGACTGCTGT GCTTCAATGT	420
GAACACGCGG CACCTTTTCC TGTGTATCGG GCACGTCCCC GCGTTTCAAT TCCTTTCCCG	480
CTTGCCCTGT TTCTTGACACA GGAAAATCTA CCCTCATGTG GACATCAGGA AAGCAAATGT	540
CCACTGCGCC GCGCCCTTTT CTCCGTGCAA TGTTGTTGCG CGCAAAGTCA AAAAGAGGCT	600
GCAACGCGGG GGTATCGCGC TGGGAATCCG CCTCCGCATA GGAAAGGCGC GTAACACGCA	660
CCATGCTCCG GAGCACGTGC ACACAGCTGA TGTCACCGTG CTCATCAAGT AAAATTTTAA	720
AAGACAGTGC AGGAGAAACT GCGTCGCGCG CGAGTGACACA CGTATCAACC ACCACGTCGC	780
TGAGCATGCG CACTGCGCCT TCAGGCAAAT AGAGCGAaA CCCCCTGTAC GTGCGCATGC	840
ATCTGCGTGC GAATCAGGAA GAACGAGCTC TGCAGGGCTC GCTACATGGA TCCAAAAATA	900
CGTACCATCG AAAGTATCG CATCGTCAGG GTCGCGCGTA CCCTCCCCAT CGATGGCATA	960
CGCGGCAAGA TGCGTACAAT CTGTGCGTGC TTGAGTGACA CACCTATGTG TGTGCACATC	1020
TTGCTGCGCC GCACGTTCTC CATCAGAACC AGACACATGA GCAGGACTTA AAAATAGAGG	1080
ACACAGACGA TCAGGATACG GATTGCGATA CACCGGCCAG AACCCGAAGT GCAAGAGTAT	1140
TTCATGCGCT TGCTCCCTGT GCTCGCAGCC TAAGGCACAC TGCAAAATCT TACAGCGATT	1200
CGCGTGCCCC AACGCGAACG CTTGATTTC CTGCAGAAAG GCGGTAAACT GCTCGTTCAC	1260
CTGCGACACG TGCACACGAT GCATTCTTTC CTGCGCAGTT GGTGCCATAT TGCCTGCACT	1320
TCGTGCGACG CGCCGTAGCT CCTGGATGAA CGCCTGCTTT AACGCCTGAC GCGCTTCCTT	1380
TTTTTCTTCC TGCACTGCGC AGGATGCGCA CTCTTGCTGA GAGCGGATGC GCACTGCGGc	1440
GGCAGGCTCA TTGCAAACAA AATACGCACT TTGCACACTT TGCTCCCAAT AGGCCCACGA	1500
CTGCGCGGCA GAAGCCCCC AGAGGAGCTC TGCAAGTTCA AAAAAGGAAG GAGCTTCGGT	1560
ACCGAAAAAC TCGCGCGCGT CCTGTACGGA TTCCTCGCTT ATACGCGCAA TGTGAGACGC	1620
AGACAATAGT TCTACCAGGG AAGAAACAGT GCCCGGGTGC AAGAGCAAAA CGTCTTTCAC	1680

GCGCACGcGT	CTTAACCCGT	GTTcGGTTTC	AATGGTgATC	TTCGCATCCT	TCCCTCGCTc	1740
GATtAgGTGT	ACACACGCAG	GGCGCTTTTCG	ATAGAGCACC	GGACTCCCCA	CATGTAGTTC	1800
CATCACGCAC	tGCGCCTGCA	GTATGCGCTG	AATAGTTTTG	AGTACGCTGT	CTACCGAGTG	1860
ACTGCAGACA	GGCGCACACC	ATCCgTCGAA	CACGCTTGaA	CCACCCCATa	CGCACACGCT	1920
CAGCACATGC	ATATGCCGCA	GCATGCAATT	GCCGAACCGG	CATATCTACG	CTTCCTACAC	1980
GATGGAATAC	GAATCCGCCA	AAACCTGTTT	TAAAACGGTA	CAACCCGTGC	ATTGGGTGAC	2040
GCACATCGTC	CGTTGGCGGA	ATACCGTAAA	AATCATACCA	AAGACAGnCc	GCGCGCACGC	2100
GCTTCTTGAA	TTGCATACCA	TTGCAGCGCA	TACGGTGCCA	TAAGATGGCG	TGCTGAATAG	2160
TCAGAAGCTC	CATACACATA	AGTTGCGCAC	GTGTCAAAAC	ACAACAATAC	CAAAGCTGCA	2220
ATTGCCTGCT	CATCAGCGCA	CCCTAATTCT	CTGTCTTCCG	ATGCCGGGGG	ATGGGGTGTC	2280
TCTATGTTCT	TCGGTGTGTC	TTTTCCTGCA	ATACGCACCC	GCAGTGCTGC	ACGCGGAGCA	2340
TAGGCAAGAC	AGAGCACCAG	CATCCCCGTG	GCTGCAAATG	CGGTGCAAAA	ATCGCGATAA	2400
TATTGACGGG	TGTGGATGGC	AATGCGATCA	CGCGCCGCAG	TTTTTTGGTA	CAGCGCGTAA	2460
AACACATCCA	CCGCCGCGCG	CAGACTACCC	GGAGAACCCT	CCTGCGCGAG	cGTATCAAAA	2520
CGCGCCaCAC	GCACACCGTG	CTTTTGCGCA	CGTCGAACGT	TGTAGCGCCA	TTTTGGTTTG	2580
AAAGCAGCAA	AAATATCTTC	CCgcGCGGGG	CGCATATCCA	ACAGCAATGT	ATCCTGAGGC	2640
TGCACGTTAC	AAGCAGCGCG	CCGTAGTCCA	CACGCGTGGA	GCTCTCGCGT	AAAGAGCTCC	2700
ATCTCTGTTC	CCACCGCGCA	aTGCGTAGAG	GAGGATGCAA	GAGAAGGGAG	CGAGCACACC	2760
GCAGCAGCCC	ACCCCCACGG	GGGATCAAAC	CGCACGAGGA	ACGGtTACGC	ACGAAAAAGG	2820
GAAGTAGCGc	GCTCGTTAAC	TCACGTAGCA	GACTGGCACG	TGCGCGCGCC	ATCTGCCGTG	2880
ACGGAATCTG	ATCGTCCTGA	AGATACGGGG	GAGCACCCGG	CGCATACGCA	AACACGCCAA	2940
AGGGCTTAAT	ATTCTTGAC	AGAATGAGCA	GGGGAAAGTG	TTTTTCTCCC	CCAGTGTTTG	3000
CATCCGGGCG	CACATGCACG	CTGAACACGT	ACGTCTGCCA	GCCGTACGCT	CGCTTGAAGT	3060
GCGCCACGC	AGGACTTTGT	AAAAACGTTT	CTGCAGTCCA	CGTCTCCTGC	GTCCACTTTT	3120
GCACGGTAAC	TACGAACATG	GGGCACCCAT	TGTACTGCTC	CCCGTGACCC	GGATCCAGAT	3180
ATCTCCCAAA	AAGCTCCATT	ACCTGCCGTG	CGCTCCCGGT	ACGCTCTGTA	TGCAGAGGGA	3240
TACGCTCTCT	CCCTCTTGCA	ATACATCCGT	CCCTTACCCC	CACACACGCA	GGGGCATgCA	3300
CAaTGCTAAG	AAGCACACAT	GAGCACCCCTg	ACCGTTCACC	GAAGAACATG	CACAATGGgC	3360
GAGCCTGTGT	GTTGCGGTcG	AggTCCGAAG	CGCACAGTTC	TTGCGCAGAA	AGGAGCGCAC	3420

CCTATGGCAG TGCCCCGAGC AAATACyTCA AAAGCAmGCA CCCGTAGAAG GCGTGCGGTT	3480
AATATGCGGC TTGA _g GCCCC GCATCTTGTT GAGTGTGGGA ACTGTGGTAA TTTTGTGCAG	3540
TCTCACCGTG TGTGTGGTAG GTGTGGCTTC TACCGGGGGC GCCAGGTGAT TAACCCTGAT	3600
GACCTTTGCT AGTGCCCCGTG CGAGTGTGCA CCTGAGCGAC TGCCTTTT _g C TCGCGCACAA	3660
GGAGGCTGCC CCGTGGATGA GTTGTTCTTA AGAATGAGGG CATTAGTGGC AGAGAAATTA	3720
GAGGTGGAGG AGGCGTCCAT CACGCTTGAT TCCTCCTTCC GAGGAGATCT CGGTGCTGAT	3780
AGCCTAGATA CCTACGAGTT GGTCTATGCG ATCGAAGAGG AGATGGGGAT TACTATCCCC	3840
GACGAAAAAG CAAACGAGTT CGAAACAGTC AGAGATGCGT ACGAGTTCAT CAAGTCCAAA	3900
GTGACATGAG CCTGTGTCTC GGTCAATTTT TTTCCCGCTC TCGTTCTCCC CTCACCCCCG	3960
AGCGTAGGGA GTCTCTCCGG CGCCTGCAAG AGACGCTCGG CGTTAAATTC CGCGATCCTA	4020
CCGCACTCGA CCAGGCACTT TCTCACCGGT CTTTGTTTTTC CTCAAAAGAG GACCATTGCG	4080
GTGTGCGCCA CAATGAGCGC ATGGAGTTTC TCGGGGATGC CGTGCTTGCC GCGGTAGCCG	4140
CCGcTTG _g CC TGTATCGCGC ACTTCCCGAC AGTCACGAGG GGGATTTAGC AAAGACTAAG	4200
GcGGTGCTCG TGTCTACTGA CACCCTCTCG GACATTGCCT TGAGCCTGCG TATAGACCAC	4260
TACCTTCTGC TAGGAAAAGG GGAGGAGCTT TCAGGAGGTC GGCACAAAAA AGCCATCCTT	4320
GCCGaCGCTA mCGaAGCTGT CATCGGTGCG CTTTTTTTGG ATTcAGGkTT CAAGGCGGCA	4380
GAGCGTTTTG TTCTCCGtCT CCT _g CTCCCC C _g T _g TCCGCC CCaTaCGAGA GAAAAAtTTG	4440
CACCATGACT ACAAATCTAC CCTCCAGGTG CTTGCACATC AGCGCTaTCG TAGTAAGCCG	4500
GAGTACACGG TCGTCAAGCG CACCGGACyT GATCACAgCG TACGCTTCTG GGTGGATGTT	4560
ACCGTTGGCG ATGCACGCTT CGGACCCGGT TATGGCACCA GCAAAAAAAG CGCAGAACAG	4620
TGCGCCGCTC GCCTTGCAATG GGAACAATTA TCCGGCACCC TCCGGGAGTA GCGCGTATGC	4680
TGCCCTGTAA GaTACTCTCC TTGTCCCGCT CTGACACCGC CCGCCCCCTC GTAAAATGGG	4740
CAGGAGGAAA GCGCGCCCTC GCCCCAACCC TTTTGTGCGA TATGCCACAG ACATTGCGCT	4800
CCTACTTTGA GCCTTTCGTG GGAGGGGGAG CGCTCTTTTG GCACTTGTGC GCGTGACTC	4860
GGGTGCGCCT ACACGACATC TATCTATCTG ACATAAATTG GCCACTGCTG TGTGCGTATG	4920
CAGCCGTTCTG TGACCGTGTA GAAGAACTTA TCGTCCGGGT TGGACAGCAC ATCGCCTGCC	4980
ACACCCCTAC CTATTACCGT CTTGCGCGGC GTAAATTCGC CGTATGCGAG CATCCGCTCG	5040
AGGTTGCCGC GCTTTTCCTG TACCTGAATC GGAGCTGCTA TAACGGACTG TACCGTGTC	5100
ATAAAGCAGG TCAATTCAAT GTGCCTCTCG GACGCGCTGC ACCTGCGTCT CTTTTCTAA	5160

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TACGCATTGA TGAGGAGAAT TTACGCAGCT GCGCGCGTGC GCTAGCAAAC ACCACTCTTA 5280
ACTGCCAACA CTTTTCTTGC ATTCAACCTG CACGAGGAGA TTTTGTGTAT CTCGATCCAC 5340
CGTACCTTGc ACCTTCAGTG CCTATGATAA AACCGGTTTT GATAGAGCAG CGCACGAATC 5400
GCTTGCTGCG TTTTGCATGC ACCTAGACGC GCGGGGAGTT CTTTTTATGC TCTCAAACAG 5460
CGATTGCCCT GAGGTACGCG CATGGTATCG TCCATTCCGT GTGCAACAAC TCAACGCCCC 5520
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TTACCCCTGC GCTGACACGG CTACACCGTA GCTTCTGCA CTCTCCTGGC CGTATCGCAT 5640
CGCGTATTGC GGCGTTTAAT GCCACTACAG AAGTTTACG GTCATAAAAA CCATCCGTGG 5700
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GGAACCGTGC CACATCTTAC CTTTGAAGCG GCACTCAGAC ACTGTGCCCA GCACTTTGGA 5880
TCTCAAATG CAGTCTGCTT CCTAGGCCAT GCTACGGACG CGCATTCGCG GTGCTGCTTG 5940
AACTACCGTC TCTTTCACa GCGTGTGCGC CGTGCACGCC AGTTGCTGAT GCGCTGTGGT 6000
GTGCGCGCAG GAAGCTGCGT TGCCTCTTT GGCCCCAACT GTCCACAGTG GGGAGTTAGC 6060
TACTTTGCAA TAGTAAGCCT TGGTGCCCGC GCAGTCCCTC TCGTACCAGA GCTCAGTCCg 6120
CAGaGCTGCG CCGCTGCCTC CAGCATGCTC ACGTTTGCTG TGTCATTGCG GGCGCTGCAG 6180
AAAGAGAAAC ACTCGCCCA GCGGATACAC TCACCGATCC GGACGCTGCT TCTTGcTCCG 6240
CAAAAGACGG GCAGGACCTT TCTACCGTAT CGCACACCGC GCAAAGAACA CTGATCGCTC 6300
TGGAAGATTT CTCCCTTGTC TGCACAACGG ACGGTGTACA AAACACTCCA GTACCTGTGA 6360
CGCACTGGAA GAATGCTGGA TCAGACCCGG ATGCCATTGC CAGCGTGGTG TACACCAGCA 6420
CCGGAGGCGC TGGCACTCCT CcCCGTGCCG TAACATTTAC CCAACGGAAT TTACTGTGCA 6480
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TCCCCCTTGC ACACTTATTC GAGTTCGTGT GTGCGTTTCT TGCACTTTTT TTTACAGGGT 6600
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CGTTCGCGCC GCCCCTGTGC TCGGCAGCTC CATACCCAAC TTGGAGGACA GcTGCGCCTC 6780
TTGGTTCTCT GGAGCGAAGA GTGCAGTGAA CACACGCAGA TTTTGCACCG GATCTCGCTG 6840
GAAGCGGTGC TCTTTCACGG GTATCTACAT GCGAGCGTGC TCATTTTTGT GACCGCAAAG 6900

AAAAATACAA AAGACAAAGA CATGCCGGCG CCACGCACTC AGAcGCGTGC GGTGCCCCGGT	6960
TTAAAAACGC GCCTTTTAAA CTACAACGCG TTCACCAGCA CCGGGGAACT TGCCTTACGG	7020
GGAGAGGGTG TAACACCCGG CTATTGGCGC GATGAGGTAC GCACACGTGC AGCGTTTACT	7080
CCCGACGGCT GGCTCCGTAC AGGGACGCTT TGGACAAAGA CAGAAACCGG TAATCTCCTC	7140
CCCTGCAGCA GCTCGTGCCA TATGCAACTC GGTGCGCGCG GAGAAGCGGT GTACGCAGAG	7200
GATCTTGTTT GTGTGCTTAT GCAACATCCg TGCCTGGTGC ACgCACACGT GCGCGTAGAC	7260
ACGCAAGGGC AAGCGCACTG CGCCGTATGG GTAAAACAAG GAGCCGAACG AATACGGCAC	7320
CCTCAGATAG TGTGCTTTTT GCGCACCCAG CTTTCACGC AGGTGCGCGT GGGGACGCTT	7380
CGGGTGATGG AGTATGAAAA AACAGTAGGT GCTGACCGCT TGTCTCGACG CGACACACCT	7440
TTCTTAAAGG AAAACTCTTT GTAGAAGGCG CAGCTCGCAC GTTAATGTAC AAAACAGGCT	7500
TCcCCTGACG GAAAAAAGG TACTCCACGT AGTGTTCCTC GATGGTTCGT ACAGGTCCAG	7560
GCAATTTTAG GCGTAGTCGC GCCTGGGCAT CTCTTTTGCG TATTATAAAC GACCTATAAA	7620
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CGCAGTTCGT TGTCAGGGTT CGGGAAGTTT CTGAGCTCAA AGAGCTTGAG ACAACACACG	21120
TCTCGTTCAC CGACTGTGCC CCTCACCTTA CGTTCAGCAT CGAACCGGTC ACCATACGTG	21180
CACAGGTGCA GGTGCCAAAG CATGTAATTG AAGAGATGCA CCCAGAGGAG TTCTTCTCTG	21240
TTTCTGCAAG AGAAATTACT GAACCCGGAC GCGTGACCGC TCCCCTTATC CTCTCGCTGC	21300
CCGAACACGT GCGTATGGTA CAGTACAGTC CCAAAGAGGT TCACGTTCAT GTGcGCGAAG	21360
cGcaktCAGT CCCGGCGGAC GGACATGAAT GATCATTTGC GTGGGAATAG ACATAGTAGA	21420
AATAGAACGA TTCGTATCTT GGACACACAA CGTGCGCCTG CTCCGTCGCT TCTTTCATCA	21480
AGAGGAGATT GTAGACTTTT TTA AAAACCA CATGCGAGCG CAGTTTCTTG CCACGCGCTT	21540
TGCCGCAAAG GAAGCATTTG GAAAGGCACT CGGTACGGGA CTCAGAAACA TGGAGCTAAG	21600
GAATATTCGG GTGTGTCAAA ATGGATGGGG TAAGCCGAGA CTAGAAGTCT ACGGTGCTGC	21660
ACAGGCTATG TTGGCTGCAA CAGGAGGCAC GCATATACAG GTGTCGCTAA CGCATGAGAG	21720
AGAAGTCGCC TCAGCCATCG TGATTATCGA GGGAGAACCG CTATGACCCG GTCATCTACA	21780
AAGAAAACAG ACAAAAAAGA AAGCACTGTG TCTTTCTATT CAAAAGAGCG CATCGAGTGT	21840
CCGGTGTGCA CAACCGTCTT CCAAAGAGAA GAAATGCATT CTGGAGGAGG TCGTACCATT	21900
GCTGGTGATT TAACCGATGA ACTAAGAAGG ACATACGAGA CGTCCGCAA GTATGGAGAG	21960
GTATTTCCCTC CCATTTACCA CGTGGTAGTT TGTCCACCT GTCTTTACGC AACCTTTCTG	22020
CAAGACTTTA GAAATATCGA GCGTGGGATT GTCATAAAC TTCTTTCCAC CACATCACAG	22080
CGCCGCACAT CAGTTGAGCG GCTCATTCCT CAGGTGGATT TTAGCGCACT GCGCACACTC	22140
TCCTCTGGGG CGGCGGCTTA CTACTTGGCA ATACTGTGCT ATGACTTTTT TGATAAAAAG	22200
TATTCTCCTA CCATTAAACA GGGGATCTGC GCGCTCAGG CAGCATGGCT TTTTCTGAT	22260
CTTGAAAAA AAGATCCGAA CGAGCATTAC GATTACATCC GCAATCTTCT ATACCAAAG	22320
GCACTTTTTT TCTATCGCAA GGCAATTGAG TGCGAAAGCc AGgCGAAGAA ATTATCGCAG	22380
GATTAAAAATC CTTTGACCG GACACGGATA AAAATTATGG GTACGACGGG GTACTCTATC	22440
TTTCGTATCT CCTTGAGTAT AAATACGGGA CCAAGCGCGA CAGAGCAGTC AGAAGGGAGC	22500
GCATGCAGCG GaACAAACAA GGACTTGCAA AGATATTTGG CCTAGGAAAG TCTTCAAAG	22560

AGAAGCCAGG	TCCATTGCTG	GAAGTCGCCC	GACAATTGTA	CGAAAACCTG	CTCGCAGAAT	22620
TACACGAAGA	CAGTGAAACT	ACATGAATGA	TGTGCGCAAA	ATTCTCTTGC	GTATTTTCGTA	22680
CGATGGAACA	CGATTTTTCG	GATGGCAAAA	ACAGGTCTCA	GGCTCACGGG	AACGTGCTCC	22740
CTCTGTCCAA	GGTGAGTTGG	AAAAAGTTGC	TGAGAAAATT	CACCACCAA	AGATAGCAGT	22800
CATCGGTTCA	GGGAGAACAG	ACTCTGGCGT	ACACGCAGTA	GGACAGGCAG	CACATTTTGT	22860
TACCCCATG	AGAAATATAC	TCGCGTATCG	CTTTATCCCT	GCATTTAATT	CGCTGCTCCC	22920
GCACTCCATT	CGCATTACAG	ACGCACGCGA	AGTCTCCTCT	CAACTCCACG	CACGCTTCTC	22980
TGCCGTCATG	CGCACGTACC	GTTACCACCT	CCACTGCGCA	CCCGTCGCAT	ACGCGCACGA	23040
ACTGCCTTAC	TGCTGGCACA	TTGCGAGAAT	GCCCAGATATA	CACCTTGCTCA	ATCAATATGC	23100
TGCAACACTC	AAGGGAGAAC	TAGACTGCAC	AAGCTTTGCT	GCTGCAGGAG	ATAAAAGTGC	23160
GAGTAAATCG	CGTTATTTT	ACGACACACA	CTTTTCTTTC	AACCATCGCG	TACTGACCTT	23220
CGAAATCTCT	GCTAATGCCT	TTCTCTGGAA	AATGGTGCGC	TCTCTTACAG	GAACCCCTACT	23280
AACTGCGGAA	AAGAAGCGGT	GCTCCGTGCG	CGAATTCGTC	CGCATTTTGC	ACGCGAAAGA	23340
CAGGCGCTTG	CAGGGCCAC	CGCACCGCCG	CATGGGCTAT	TCCTATGGAA	CATCCGTTAC	23400
CCCGAACACT	TACTCCGTGC	AGAATAGGAA	CACCCTCGCA	CGTGAAGTGG	CATCCACAGG	23460
CAATGCAAGG	TGGAAGACGT	ATTAAGCATG	CACGTTACAT	CTCTTCAAGA	AAAGGAATCA	23520
GCACCAGACG	CATAGCTGTT	CTCAGCACTA	TGCGCACCGC	ACGCACAAGT	TCAAGCCTTG	23580
CACACGCGTA	GTCCGTCGT	GCTTCACACA	GAATGGGACA	ATCATGATAG	AAGCGACTGA	23640
AGCTTTTGA	GAGTGTATAG	AGATACCCGG	TAATAACGCT	CGGATCATGT	CCCTGTGCAG	23700
CGCGCGTGAC	ACACGCAGGG	AAACGTGCAA	GCGCCTTCAC	CAACTCCCAC	TCAGCTTCGT	23760
GCGTGAGCAA	TGCAGGGTCA	CACCGGACTT	CACGAGGTCC	CTTTTGCTCC	ACATCTTCCT	23820
GAACCTTCTT	TAAAAGAGAA	GAGATGCGAG	CACCCATATA	CTGTAAATAG	GGACCAGTGT	23880
TTCCGTTAAA	AGACAAAGAC	TCTTCGGGGT	GAAACACCAT	ATCCTTTTGA	GGACTGACTT	23940
GCAATAAAAA	ATAATGAAGC	GCGGCGATGG	CAACATTCTC	TGCAATACAC	TGTGCGTGTT	24000
TCAGTGCAAT	TTCCCGTCCC	TTTTTTGCAA	TTTCCTCTTC	TGCCGCACTG	TGCAGACGAT	24060
CCAAGATATC	GTCTGCATCT	ACTACCGTCC	CCTCTCGACT	CTTCATACGC	CCATGGGGCA	24120
AGTTGACCAT	GCCATAAGAG	ACGTGATGCA	ACTGCTGCGC	CCACGGATAA	CCGAGCAACC	24180
TAAGCACAAA	GAACAATACC	TTAAAGTGGT	AGTTCTGCTC	GTTTCCCACA	ACATACAGCA	24240
ATTGATCAAA	GGGCCAGTCC	TGTGCGCGAA	AAATCGCCGT	GCCAATATCC	TGCGTAATGT	24300

ACATAGTGGT GCCGTCAGAG CGAAsnAACG CCTTTTTGTC TAAGCCTAGA GAAGACAAAT 24360
 CCACCCAAAT AGAGTTGTCC TCCATCTGAT AAAAAACGCC GCAGcAnAAC CACGTCTAAC 24420
 CTCTTCACGT CCCTTGGTAT AAGTTTCGCT TTCAAAATAA AGTTTATCAA AAGATATGCC 24480
 CGTTTCGCTCA TATGTTTGTG TGATACCGCG CAACGCCCAT TCGTTCATTG TTCTCCACAG 24540
 CGCACGCACG TGGGATTCTG CACTTTCCCA GCGCTGTAAC AGGTCACGCA CATCGTGcTC 24600
 TGCTTCTTCC GGGTACTGCT GTGCGTAACG GTTAAACTGC ACGTACCAAT CTCCCACAAA 24660
 GCGATCGGAC TTGATGCCGG TATGCGCAGG TGTTTTTCCA TGGGCGAATT TTTGATACGC 24720
 GCACATAGAT TTACAGATAT GTACTCCGCG ATCATTGATG ATATTTACCT tGAACACATC 24780
 CGCACCACAG AACGCAATAA TACGCGAAAG GCTTTCCCCA ATCGCGTTAT TGCGCAGATG 24840
 ACCTACATGC AACGGCTTGT TAGTATTGGG ACTAGAGAAC TCAACCATGA TACGTTTGCC 24900
 CTGTAAGTAC TGCGTGTGGC CATAGCGCTC CCCcTGC GCA AAGATAGCAT CAAGCGTATG 24960
 CGCAGtACAC ACTCCTTATT TAAAAAGACA TTAAGATAGG GTCCTCGCGC CTGCGGGTGc 25020
 CATACGCACA CATGGACGTG TCTTCTTCAA GCAGTGTGCA CAACTGCTGT GCAAGCTGTG 25080
 CAGGACTCCT GCGCACACGC TTTGCAAAAA GGAATAGAGG aAAAGCTATG TCCCCCATAc 25140
 CCGGCTCCGG CGGCTCTTCC ATAActAACT GCGCACCTTC GACCGGn 25187

(2) INFORMATION FOR SEQ ID NO: 36:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21170 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

TGCATGAAAA TACAACCAGC TTGCTGCATT AAGAACGCAT CAGTACCGTA GCGCAGATAC 60
 GCACATGGCT TACCACGCCG CGTAGACGAA TGGTCCTCAA TATCATCGTG CAAAAGGCTG 120
 GCTGTGTGAA TGAGCTCTAC TACCGCGCTC AGTGTGTACC ATTGCGGTTT GGAAATTTTC 180
 TTCTCTTGT GTCTTGGAG TTTCCGATGC GTGCACTGCA CACACGCGTG TGCAAGTTCT 240
 GCAGAAAGTA TCAGTAACAA CGGTCTCCAG CGCTTTCCGC GCGAGCTGAc ACACGCGTTG 300
 CACACGGTGC GCAGGACGCG CGTATCTTCG GACGcAAGGA CACGGAGCCG CGTTCCCATC 360
 CACGAGCGCG TAGtTGCGCa GGAAGTGCAT CGGCGAGTGC TCGTTCAATA TTTCTGAGTC 420
 GTTGAGCAAG TGCaCGTTTC ATAGTACCGT TATACGGCGT GTTTGCCTTT TGTGCGAGCA 480

CGATGTGTGG	GAGCTGTCTAG	TGTAACACAT	AGCATGGGGG	GCGTGTAGGA	AGGTGTGAAC	540
GTCTATAAAC	GTGCTGATTT	TTGGGCAAAA	AAGGCAGCCG	CCgCGGGGTA	CCGCGCGCGT	600
TCGGTGTATA	AATTAGCGGC	GCTTGATAAA	AAATACTCCC	TCCTGTCGCG	CGCCTCGCGG	660
GTGCTCGATT	TGGGCGCCGC	GCCAGGAAGC	TGGACCCAGT	ACGTGCTGGG	CACCGCTGCT	720
GCGTGCACCG	CCGTGTGTGC	GGTGGATGTG	CAGCCGATTG	CGTCGGACAT	TCAGGACGCG	780
CGTTTGCAAC	GAGTGCAGGG	GGATTTGTGC	GCAGCAGATA	cACGTGCGCG	TGTTGCGTGC	840
AACGCTCCTT	TCGATCTTAT	TCTTTCTGAT	GCCGCACCTC	GTACGACCGG	AAACCGCACA	900
GTAGATACGA	GCGCTTCTGC	GTGTCTTGCA	GCAGGGGTGT	GTGCGTACGT	CAACTTCTTG	960
TCCTCTGATG	GAGGATTGGT	GTTCAAGGTG	TTCCAAGGGT	CAGAGCACCT	TGCTATCCTT	1020
ACACACCTGC	GTGCGCATTT	CGGTGCGGTG	TGTAGTTTTA	AACCGCCTGC	TTCTCGTCCC	1080
CGTAGTTGTG	AGTTATATGT	GGTGGCGCGT	TTCTTTTCGCG	GTACGTGCGG	CAAGTAATGG	1140
GTAAGAATAG	GGAGCGTAGG	CGCCTGTGGC	ATGCAATCAG	GCATTGATCC	ATTTAGCAAA	1200
CTTGCGTCAT	AACCTCGGTG	AAATTATGAG	CCGTACACGC	GCGCGTGTGT	GTCTACCTGT	1260
TAAGGCGGAC	GCGTATGGAC	ACGGTGCGTG	TGACGTGCGA	CAGGCGGCGC	TTTCGTGCGG	1320
GGTGCACTCG	TTCCGCCGTTG	CATGTGTGCA	AGAAGCGTCG	CAACTGCGTG	CGGCAGGTGT	1380
TCGCGCGCCG	ATTTTGTGTT	TAAGTACTCC	AACTGCTGAA	GAGATTCTA	GTCTTATTGA	1440
GCATCGTGTG	CACACCGTGA	TTTCTGAGCG	CGCGCATATT	GCCCTTATCG	CACGCGCGCT	1500
CCGTCACTCT	GCTGATACGG	GTGCCACGTG	TGGGGTACAC	GTAAAGATTG	ATACCGGAAT	1560
GGGAGAATC	GGCTGTGCGC	CGGATGAGGC	CTGTGCGCTC	GTGCAGATGG	TGTGCGCAAC	1620
ACCGGGTCTC	CATCTTGAGG	GGTATGTAC	GCATTTTTCT	GTCGCGGATT	CTGTGCGTGC	1680
TGAGGACCTG	CAGTACACTG	AGATGCAACG	TGCACATTTT	ATGCATTGCG	TACAGTACAT	1740
ACGGAAGT	GGCATATCGA	TTCCATTGGT	GCATGCGGCA	AACTCTGCAG	CGCTGTTGTG	1800
CCATCCGCGG	GCACACTTCG	ACATGGTGCG	TCCGGGATTG	TTGGCATAAC	GCTATGCCCC	1860
TGAGTCTGTG	CATCCTGCTG	TGCGCAgTGT	GTTCTTCCC	GTCATGGAGC	TTGTTACCCA	1920
AGTCCGTGCA	ATCAAAAAAA	TACCTGCAGG	CGCGTACGTT	TCTTACCAGC	GCTTGTGGCG	1980
TGCGCATACA	GAAACACATG	TAGGTATTCT	GCCTATCGGA	TATGCAGACG	GAGTTATGCG	2040
CGCGCTGTCTG	CCGGGTTTGC	AGGTGTGCAT	TGGGGGGAAG	TGGTATCCGG	TGGTGGGGGC	2100
AATTTGCATG	GACCAGTGTG	TAGTGGACCT	AGGTACCCCG	CTGCGTGTGA	CAGTTGGAGA	2160
TAGGGTGACA	CTTTTCGGTC	CTCAGGACGC	AGGTGGCCCA	GGACAGGGGG	CAGATGTGCT	2220

CGCCTCGCAT GCAGGCACCA TTCCCTATGA GCTTTTGTGC GCGATTGGTA AGCGTGTCTGA	2280
ACGGGTGTAC ATCCGGTGAA TATGTTTTTG CAACGTTTAT AAAAAGAGAC AAAGGGAGGA	2340
AGGCGCGCAT GAATGTCTC GGAATTGAGA CCTCTtGTGA TGAGACTGCA GTTGCAATTG	2400
TAAAAGATGG CACGCACGTG TGCAGCAATG TTGTGGcTAC GCAAATTCCT TTTCATGCGC	2460
CGTATCGTGG CATTGTCCCA GAACTTGCAA GTCGCAAGCA CATTGAGTGG ATTTTGCCAA	2520
CGGTGAAAGA GGGCCTTGCA CGCGCTCAGc tGACGCTTGC TGATATCGAT GGCATCGCCG	2580
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ACGACGCTCC CGGGGAAGCC TTTGATAAGG TTGCAGCCTT TTATGGCTTT GGATATCCGG	2880
GAGGCAAGGT AATTGAAACG TTAGCAGAAC AGGGnTGnGC gCGTGCCGCG CGTTTTCCGC	2940
TTCTCATTT TCACGGAAAA GGGCATCGGT ATGATGTATC ATATTGAGGA TTGAAGACAG	3000
CAGTTATTCA TCAGCTCGAT CACTTTTGGA ACAAGGAATA CGAgCGCAcT GCGCAGAACA	3060
TTGCTGCGGC GTTTCAAGCG TGTGCAATCA ACATCTTGCT CCGTtCCcTT GCGCGCGCAT	3120
TACAGGATAC AGGGCTGCCA ACGGCAGTAG TGTGCGGAGG TGTTGCAGCA AACAGTTTGC	3180
TCAGAAAATC TGTAGCGGAC TGGAAGCATG CGCGGTGTGT GTTCCCTTCG CGTGAGTACT	3240
GTACAGACAA CGCGGTGATG GTTGCTGCGC TCGGGTACCG CTATTTGATC CGTGGTGATA	3300
GGAGTTTCTA TGGGGTAACA GAGCGTTCGC GCATTGCGCA CTTAGTAAG CGCGGGGAG	3360
ATCGTCTCGC TGCACAGAGA AGCGCTGCTT CTCAGCCTCT TTTTTGAGCA TGTGCGGCTC	3420
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CGACGCGATG AAGCACGCCA ATGGCAGCAG TTCCAACGTG AAGCCCACTA GTGACACGCC	3540
TGGTACAGtG wACcGCGTGA TAGAAAAGCC TGCCGCACGC AGAAATGCAA ACAGTTGTGC	3600
AAGGTACATA CACAGTACGC CCGCGATAAA GCACACCGTC TCCTGGGTAC GGGTCTTTGT	3660
CCACGCGACA ATGGCGAGGA ACACAGCAAC CGCCGTtACC GCTAGGCGTA ACATCAGCAA	3720
AATAGTCTGT GCTCGAGAGA GCAGAGAGAG AAATTCATTC ATTCGTGGTG TTCCTTTTCC	3780
TGTTCTTGAA GAAAAAAGT GCATAGCTGG GTATAGTGCT CGAGCGTAGG GAGTACTGAG	3840
GGTTCACTGT ACAGGGGGGA GAGCAGGATA TGCGCGTCAA GCgCACGTGC GAACAaTGCC	3900
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TCCTGCGTGG TGTGTGAGGA GTCTAACAGA GCGTGAGGCA TGGCGCGTGC GGGCTGAGAA	4140
AGGGAACCCA CGCGCGCTAA GTCCCAAAAG GCACGAGCAA TCGCCTGCGC AATCGGAGCA	4200
AAGAGCACGT cCCCCGAGG GCGCGCGCG GCACAGTGGG CACGGAGCGC AACAAACGGT	4260
GCAGGAGAAG GAAACGGCGG CACAACCAA AAGACATCGG TTTGCGGGAC GCACGGTGCG	4320
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ACCACAGCTT AAGCGTCTGA TTAAGGCTTG TTTGACCGGG CTGTTAGATG TGGAAGCGTT	5460
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TGATCCCTTC TCAGAAACT AACGCCCCAC CTCCTACTGG AGGAGGCGTC TCTTTCTCAT 5880
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GCCGTGCTGT AAATCAGCC GGTAGAATTC CTCTGCCcAc GCAGCGCGCC GCGATGCAGC 6000
AATCTCTGCC aCGTACCGGC GGTGGAGTCC ACcTGcAcGCG TCCTTCGTTA CCAGTGCGTC 6060
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CGCGTTCGTA AGATCCGTAC GCTCAACAGG ATGCCCCCG GTTATGACCG GCATTGCCgC 8100
GAGCTCCTGC CTGAAGAAGT TCGGGAATGT CTCGCATCCG GGGTTCACA TGTGATCCGC 8160
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CTCACCGGTG CTACCGTGAG TGCCCCCTG GTAGGAACTA TCCGCATCCT GGGGGCGTCA 9180

CGATCCTGTG	CGCGTATTGA	ACACGTCATT	CGTGAACGCT	TTTCGGATGA	CAGTCAAGGA	9240
GTGGGAGGAG	GCTGATATTC	TCAGTTAACG	CGGGCTATAG	GGAAAAGAGG	TATGCAGGGG	9300
ATGTGTTCAA	AGGCGGGCGC	GATCTCTGTG	AGGTCGCCgC	GGGTGCTGAC	AGTATGCTAG	9360
ACAGGGGGGA	AGGTGAGCGG	CGCKTCACCA	TGGAGAAGAT	tGTCGGTCTC	TGCAAACGGC	9420
GTGGCTTTGT	GTTTCCATCT	TCAGAAATTT	ATGGTGGCCA	AGGAGGTGTT	TGGGACTACG	9480
GCCCTATGGG	CATTGCGCTA	AAAAACAATA	TGCCCATGC	CTGGTGGCAA	GATATGACAC	9540
GCCTACATGA	TCATATCGTC	GGGCTGGATG	CAGCAATCTT	GATGCATCCA	AACGTATGGC	9600
GGACGTCTGG	CCACGTCGAT	CACTTCAGTG	ATCCTTTGGT	TGATTGCACG	GTGTGTAAAA	9660
GTGCTTTTCG	CGCGGATCAG	GTTGCCGTGC	CGTCTGCCGG	GGGACCCTGT	CCTCAGTGTG	9720
GTGGGGCCCT	CACGGGCGTG	CGTAATTTTA	ACCTCATGTT	CAGTACCCAC	ATGGGTCCTA	9780
CGGATGAGCG	TGCCAGTTTG	CTCTACCTGC	GTCCTGAAAC	TGCGCAGGGG	ATTTATGTAA	9840
ATTATAAAAA	CGTCCTGCAA	ACTACACGCC	TGAAGGTGCC	TTTTGGTATT	GCCCAGATCG	9900
GTAAGGCGTT	TCGCAATGAG	ATTGTCACAA	AAAACTTTAT	TTTCCGTACG	TGTGAATTTG	9960
AACAAATGGA	AATGCAGTTT	TTTGTGCGCC	CCGCAGAGGA	TACTCACTGG	TTTGAGTACT	10020
GGTGTGCACA	GCGCTGGGCT	TTTTACCAAA	AGTACGGGGT	GCGTATGAAC	CACATGCGTT	10080
GGCGTACCCA	TGCTGCACAT	GAGTTGGCTC	ATTATGCACG	GGCTGCCTGT	GACATTGAGT	10140
ATGCATTCCC	TATGGGCTTT	AGGGAATTAG	AAGGGGTGCA	TAACCGTGGT	GACTTTGACC	10200
TGACgGCCA	CGCGCAGCAC	TCGGGTAAAG	ACTTGTGCTA	TGTGGATCCT	GATCCAAACC	10260
TGGATGCGGC	AGCGCGTCGG	TATGTGCCTT	GTGTCGTTGA	AACGTCTGCA	GGATTGAmGC	10320
GCTGCGTACT	CATGTTTCTG	TGCGATGCAT	ACACAGAAGA	ATATGTGCAG	GCGCCGAATG	10380
TCGCGTTTTC	GGAAACGACA	CAGACAGCTG	ATCAAGAAGG	TGCTGCACGT	ACGGGCGAGA	10440
TGCGAATAGT	GCTGAgGTTG	CACctGCGCT	TTCTCCCACC	ACTGTTGCTT	TTTTGcCTTT	10500
GGTAAAAAAA	GACGGATTGG	TTGACCTTGC	GCGTGCGGTG	CGCGACGAGC	TGCGTGAGGA	10560
TTTTGCCTGT	GATTTTGTATG	CaGcTGGCGC	GATTGGAAAG	CGCTACCGCC	GTCAGACGA	10620
GGTGGGTACT	CCCTTTTGTG	TCACAGTTGA	TTATCAGTCA	AAGGAAGATG	ATACGGTTAC	10680
GGTACTcTGC	GCGACAgCAT	GGCACAGCGC	CGGGTCTCTC	GTGCCTTTCT	TGCAGAGTTT	10740
TTGCGCACAG	AGATAAAACA	CTACCGGCGT	CCCTAGGTTG	TTGTCCGCTC	TCTGCGCGCG	10800
GGGAAAATGT	CACATATTAC	ATCGCGAAGG	AGCTCTCGTA	TGAAAGCGTA	TTCTTATGCA	10860
GTAGAGGATC	GCTCGCTTCT	CACTCCTTTT	CTGTATCGCT	TCTGTGTAGA	TCCGCTGTTA	10920

CGCGTGGTGC CGTATCGAGT TCCGGCGAAT CTCATTACGc TGTGCGCAA CCGCTGTATG 10980
CTGCTTGCA TTTACCCATGC GTACTGCGGC TCGGTGGGGG GTACcTACGC GTATTGGTTT 11040
CTAGTTCCTG TGCTGTGTAT TGTGTACCTG GTCGGAGATT GTCTTGATGG GCGCCAAGCT 11100
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CTTTCTTCT TTCTCTGTGT ATTTTCAAGT ACGTATTTCC CCACGCAGAT TGGATATATA 11580
ACGGCACTGT GCACGTTATA TCACATGCGA TATGCAGAGC GCCTTCTGCG CGTCATTGTA 11640
CAGGGGGAGG GAACTGCCCCG TGTGAgGTG TTGGTGCCAC TTTTGTGCGG TGTGTTGTTT 11700
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ACTCACGGGT	CTGGCGCGGG	TTGATTTTTT	TCTGTTAGAA	ACGGGAGAAG	TATATGTGAA	12780
CGAAGTAAAC	ACGATGCCCG	GTTTTACGTC	GATATCACTC	TTTCCCCAAA	TATGTCAGGC	12840
TGCAGGTGTT	GCACCGCAGG	ACTTAATGGC	ACAACTCCTT	TCTTGCGCAC	GAGAsCgctT	12900
TGCAGCGCGC	GCCGCACTGA	GCACCGACTT	GCACGCCCAC	GTGTGTGCGC	CCTCGGTGAC	12960
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CCCTACTGCT	TAGAAGGCAG	TCGCTCTATC	CGGGTGAGCT	ATGATCCCGT	GGTACGCTGC	13080
GAGCAAAAAC	CCTGCAAGGg	TGGaTAAAAA	TATATAACGT	GTCAACAATC	CTAGAATGCT	13140
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GCGGCTAGTG	CGTACTGCAA	AGTCGCTGGG	ACAAGAAmGc	sTTGCgCTTA	CCGACCATGG	13320
GAATATGTTT	GGTGCCTTGC	ATTTTCAAAA	AGTTTGTCTT	GCTGAGGGTA	TCAAAGCGAT	13380
TATCGGATGT	GAGCTCTACG	TGGCACCCGA	AAGTCGCTTT	GATCGCAGTG	AGCATACTAT	13440
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TGTGCATTGG	AACGAAGAAG	AATCGCTCCG	ATCCCAATCG	GCTTAAATTT	AAAACAGACG	13920
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TGCTGAATAC	GGTGCGCATT	GCACAGAGAT	GTAATGTGCG	GATTCCCTCAG	CCTGGCCCCG	14040
TGCTTCCGCT	CTACCAGATT	CCTCATGAGT	TTTCCAGCAA	GGAACACTAT	ATTCGCCATC	14100
TGGTCCATCG	AGGTTTGTAT	GATCGCTATG	CAGTAGTGAG	CGAAGAAATT	AAGGCGCGTG	14160
CTGATTATGA	ACTAGATGTT	ATCGTGAGGA	TGGATTTTGT	TGGCTACTTT	TTGATCGTGT	14220
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GAGCAAGTTC	TATTGTTGCA	TATGCGTTAA	AAATTACCGA	CATCGATCCC	CTTAGATATA	14340
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ACAATGTTGG	GCAAATTATT	ACGTTCCGAA	CACCTTAAGCC	AAAGGCGGcG	ATTCGTGATG		14520
TAGGGCGCGT	GTTGGATATT	CCGCTTTCCG	AAGTTTGTGAT	GATTACAAAA	CTGATGCCTG		14580
ATGATCCAAA	ACTGACTTTT	AAAAAAGCGT	ATGAATCTGA	ACAATTAGCG	CAAATGAAGC		14640
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GATAGGCGCC GACGCGGTAG TTGAGCCGGT TCGTGAGGAT ACGGTGTTAG GGGCCGCTCT 17760
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GGGAAGTCCG	CAATTTGCGT	GCCTTGTTGG	AGCAGTTTTG	TTCGTTGTCT	GATGTGCATG	19140
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CTGCTCGAGT	ACGTCTCGGG	GCCTCTTGCG	CAGCGATGAC	GATTAACACG	TGTCGGGAAA	19560
CGGGGCTCCA	TAGAGCGCTG	AAGGACTACT	TTAGTCCTCG	TGGTTCTCGG	CAGGAAGTAG	19620

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TCAAACCTAT CTACGGACAC TTCCTTGAGG CGTTGCGCAG CAGCATACAT CCCTATGCGA 20940
GATGGATCGG CAACATCCCT GCTCCCAGCC GCCTCCTGCG CATGGGCAGA AAAAACCAAC 21000
ACCCCTACAC TCACCACCGC TATCTTCTTC ATTGCGCGCT CTCTCCTTCC TCCTTGAACT 21060
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ACTGGTCAAA GAACACGTAG AAATCATCCA CCCGCTCTGA TGGGCTAGTA 21170

(2) INFORMATION FOR SEQ ID NO: 37:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11516 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

ACGATGATAA TCCTCCTCCC TTCAATTCTG ACTTCGGCCT TTnCCACAAC GCACCCGCGT	60
CATTGACTTG ATCTACTTTC TTCTGAGTAT CCGTTACCGC TCCATCCTTG TCGTACTCCT	120
TCTGCAGGTA ATGCAGATAG ATGGGAAACG CGATATGATC AGAATACTTC TTAATTACCT	180
CTTCAAGACG CCAGCGCGTT GCAAACTCGG AATTTTCCTG GCTCAGGTGC AACACAACGC	240
AGGTACCGGC ACTACCCTCA GCAACCCCTT CAAGTACTGG GAAGGCAGCC GCATCAACCT	300
CATCCAAGGT ATAGGCATTT TGCCCTTCAG ACGTCCACTT CCACACGGTG TTCTCTGCAG	360
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GCGcTTGCGA ATGCAACTGC TTGTACGTAC CATCAACAAG TGCCTCATAC TTCAACTTAT	660
CTAACGCATC CGACGCATTA GAGATAAGTT CCCGGAGAAA AATCTCTTTA TGGGAATAGA	720
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GTCATGGATT ATCCGAGAAG GACTATAGCT TGTGGCGAGC TGCGCAGGTG CCACGTCGGA	1020
ACGGTAGTTG TGCTCAATGG ATGGGTCCAC CGAAAGCGGT CGCACGGAAC CGTTAGTTTC	1080
TTTAACATGC GCGATAGGTC CGGAATAGTG CAGGTTATAG TGAGCCAGGA GGAAAACGCT	1140
AGCCTGTGGT CCACGGTAAA CCGCATACGG TTGGAATGCT GTCTTGCACT CGAAGGCGTG	1200
GTGCGAGAGC GACCTCCTTC AATGATAAAT CGCGCCCTGC ATACCGGGGA GGTGGAGGTG	1260
CACGCTCGCA CGCTGTACGT TCTCTCGGAG AATGCTGTGC TTCCGTTCCG CGTTGATGAT	1320
GTTGTGCATG CGCACGAAGA TATACGCTTA AAATATCGCT ACCTCGACCT GCGCTCTCAG	1380
CGCATGCAGG AGCGCATTCG ACTGCGCTCA CGCGTTGCCC TGGCCATACG GCAGTTTTTA	1440
AGTATGAAAG GTTTCATCGA GATCGAAACT CCCACCTTCA TCTGCTCTAC CCCCAGGGG	1500
GcACGTGACT TTGTTGTCCC TTCCGAGTG TGCCCCGGGC GTTCTATGC CCTGCCACAG	1560

TCCCCCAGC	TGTACAAGCA	GCTTCTGATG	GTGGCAGGGT	TTGACCGCTA	TTTCCAACCT	1620
GCCCGTTGCT	ACCGAGACGA	GGATGCACGA	GGCGATCGTC	AGCCAGAATT	TACCCAGATA	1680
GACCTTGAGA	TGAGCTTCGT	TTCTCGAGAC	GATGTTATGC	GGGTGAACGA	GGATATGCTT	1740
CGGTACGTGT	TTAGAACCAG	CATCGGTGTC	GAAGTGCCTA	CCTTTTTTCC	TCGGCTTACC	1800
TACGCGCAGG	CGCTAGACCA	ATATGGAACA	GATAAGCCAG	ACATGCGCTT	CAAACCGGTC	1860
CTGCAGAATG	CAGACTTTAT	GGGAATGCTT	GGCACGTTCA	CCCCGTTTGA	AGAAGTCGTC	1920
GCACAGGGTG	GCAGCATCAG	AGCACTCGTT	CTTCCGGGCA	AGGCACGTTG	CTACAGCCGT	1980
AGnAAAtCGA	AGCGTTGGAG	TCTATCGCTC	GAGCACATGA	GGCGCACCAC	CTTTTTTGGC	2040
TTAAGGCAAC	CGGTGGAGGC	CTCGAGGGGG	GTATCGCAAG	GTTTTTTGCa	GGGGTAGAGT	2100
CCGAAGTACG	CCGGCGACTT	TCTGCTCAGG	ATGAAGACTT	GTTGCTCTTT	GTGCGCGATT	2160
GCCGGCACCG	CGTGTGCTGC	GTCGCACTCG	GCGCAGTGCG	CAGCGCTCTT	ATCAGGGACG	2220
AGTCGTTCCC	AGAGAAGGAG	TTGTTTTCTT	TCGTGTGGAT	CGTTGATTTT	CCCCTCTTTG	2280
AATGGAACCC	AGCGGAAAAC	AAGTGGGACC	CTGCTCATCA	CATGTTCTCT	GCTCCTCAGG	2340
AACAGTATCT	TGAGACGCTC	GAGCAAGATC	CCGGTTCCGT	AAAAGGTGAC	CTCTATGATT	2400
TGGTGCTCAA	CGGGTATGAG	CTGGCTTCAG	GCTCAATTCG	TATCCACGAC	ACACAGCTGC	2460
AAAAACGCAT	CTTTAAGATA	GTGGGATTAG	ATCCTGAAGA	AGCGGGGGAA	AAGTTCGGGT	2520
TTCTCACAGA	AGCGTTTAAA	TACGGCGCGC	CgcGCACGGc	GGCATcGCAC	ACGGGTTGGA	2580
CCGCCTCGTG	ATGCTCATGA	CAGGAAGCGA	GTCAATTAGA	GACGTCATTG	CTTTTCCTAA	2640
AAATACACTC	GCCGCCAGCC	CCCTGGACAA	TTGTCCTAGC	GTGCTCGATA	AGCGTCAGCT	2700
TGaCGAGTTA	CACCTCACTG	TACACGTCTA	GGGGCATCGC	TACTCGCTCG	TCGGCGTAAA	2760
ATACCTACCA	GGGGGGGGAG	GGGTACATGG	CTTTTACTGA	GAAGCAAAAG	GGTACTTTGT	2820
GCCTAATGTG	CTCGAGTTTT	TGCTTTAGCG	TGATGAGCGT	CTTTGTGCGT	CTTGCAGGGG	2880
ATCTCCCCTC	TATTCAGAAG	GCATTTACGC	GTAACCTGGT	CTCAACGCTC	ATCTCGGGAT	2940
CTATGCTCTT	TCGTGCGCGT	ACCCGCGTCC	ACGTGCAGGA	TCTCCCCATG	CTCTCCTTGC	3000
GTACCGTGTG	CGGGACGCTA	GCAATCGTCG	CAAACCTCTA	CGCAGTAGAA	CGCTTAACAT	3060
TGGCAGACGC	GTCGTTGCTT	TCGAAGCTCT	CTCCGTTCTT	TACCATACTG	TTTTCTTGCC	3120
TTTTCTTGGG	AGAACGCATT	GCGCCGTATC	AAGTCGTGCG	CCTCTGTGGT	GCCTTTGCTG	3180
CAGGCACGCT	CGTGGTCAAG	CCGAGTCACA	CCCTTTCTCA	CCGTGTATTT	CCCGCGTGTA	3240
TTGGCGCAGT	AGGAGGCATG	ATGACGGGAG	CTGCGCACAC	GTGCGTACGC	TACCTCTCCA	3300

CCCGTGGCGT AGAGAAGTTC TTGGTTATCT TTTTCTTTTC tTCGGATCGC TGCTATTGCT 3360
GCTCCCTGCA TTTATATGGC AGTACCAACC GATGAGCTCA CCGCAAGTgc TTACGCTGTG 3420
GGCCGCAGgA GTGGCAGTAG CAGGTGCACA GTTTTTTCTC ACTGTTGCGT ATCGATACGC 3480
GCCAAAAAAG TCGATTCCAA TTGACTATAC CCACATCTTA TTTTCGACGG GCATCGGTTT 3540
CTTGTACTTT AAAGAGGTGC CCGACCACTG GACCGTAGCG GGCATCGGTA TCATTCTCGC 3600
CATTGCCCTG TACGTGTTTG CGCGCGAGcg TGaACGGAAA GAACCCACCG TGCCGTCGCA 3660
CACACGCTAG AGCCGATGGC ACGCACGTAC GCGAAgCACA TGGTCTACCC CATGCTTAGA 3720
TTTTTCTCGG TAAAAGAATG AGGCAGGTGC GCGTGACGTG CACAGGAACT TCCACCGCGT 3780
ATTTGCCGTC GTGCGGCGCG TCACGTACAG CGACAACGTG GAGAAAATCC TTTCTCGCAA 3840
GCAGCCgCCC TGAGGGGCGC TGGTACTGAG TAAATCGTA GCTCACACCT ATAACACGAC 3900
GACCACCAAG CGGTACCGTA ATGCGTCCGT TAATGTCGGT AcGGTAcGTT TCATGCTCTG 3960
CATGCTCGAA ATGGACAGTG CAAGGCAGCG CTTCGTACGA GATGTGGAac ATATCCGCCA 4020
CGAAGATATG CACGAAATGG GTATCTGCGC GCGGCGgGGT TTTACATGCA GCGACACACA 4080
CCCCCACCGT AAGCGCCACA GCCAGAAAAA ATGCTGCACG CGCGCTGTAC CCACACAAGG 4140
TAACGGAGAT TGCCGCACGC GAGGTTCCTC TCGTATACTC ACCCCTCGTA TGAGTACTTG 4200
GACACACATC TGGTCTACTG CGTTTACCTT GCTGTTTATT ATCGATCCGA TTGGGAACAT 4260
ACCGGTGGTA CTGTCytGCT GCGCACCGTG CCAGCTGAGC GTCATACCCG GATCATTTT 4320
AGAGAACTGC TTCTAGGACT GGTGCTCATG CTCTCCTTCC TTTTTTGCGG AAAAGTTTTC 4380
CTATCTTTGT TCCAGCTAGA AACGGGAGTA ATGAAAATGG CCGGAAGCGT CATTCTCTTT 4440
CTCGTTGGCA TCAAGATGGT ATTTCTTGAT CAACACGCGC TCCCCTCCAC CACAGAAGAG 4500
GAACCGTTTA TTGTTCCCAT CGCCACTCCC ATGATCGCAG GTCCTTCGGC GTTCACCACG 4560
CTGGTAATTA TGGGAGAGAC GAAGGGGACA TCCCGTCTCG CCACCTGTGc tGCGCTGCTT 4620
GTTGCGTGGA CGCTCGCGTG TCTTATTATG ATAAGCGCAC CGTGTCTATA CCGTCTTCTT 4680
AAAGAAAAGG GAATTACCGC GCTTGAGCGA ATCACAGGTA TCTTGCTGCT CATTCTTTCC 4740
ATCCAGATGT GTGTTGAGGG AGCCCGGGGc ATTATTGCCA CTCCTTAGCA AGAAGGAAAA 4800
CTACCCGCTG CGTACGTGCG GGCTTAGGGG ACGACGACAA CGTTCGCGAC TCTGCCATCT 4860
GCCAGGTATG CGCGGGCGTT GCTCTGGGTG TCAAAGGAAG AAGTGCCATC TTTGACGAAG 4920
GCATAGAGCC ACCTTCCAGG CGGGAGGGGA AGCTCTAGCT CGTAGTGGCC GGGACGCACC 4980
TCTTCCAGAG AGTACATGAA TGGATCCCAG TTGTTAAACG TACCTGCAAG gTGGATAGTC 5040

TGTCCCGCTG	CACCCCTGGTA	CACAAACCGA	GTGCCC	CGCG	CCGTATGCTG	GGTTTGATAC	5100
GATTTCGTGAG	ACGGCACATC	GAGGTAAGAA	ATGGaCATGC	CATCGCGGTG	ATCGTAGCTT		5160
TCGAAGCTAT	TTTCAGGATC	GGTAGTCCAC	AACCCATCAA	TCACAAGCCG	GTAACCTAAA		5220
CGCGAACACC	cTTCAGGAAT	AGGCGCGATA	TGGAAAAGAA	CGGAGCGTTC	AGTGAGATTC		5280
TGGGCGCTCT	CTTGACTGAG	GCGCACGAAC	GAGTATATCG	GGCGGTACCh	TTCTGTGCTCA		5340
AACGCGATAC	CCACGTGGCG	CGCTGCCCCCT	GACGCagTAA	ACACGACGCA	GCGCCCCCTGA		5400
ATCCGAGGCG	CTTCCACGCG	GGAAATAGAC	TCGATAAGCG	CGCGGCGcTG	CGTCGGATCA		5460
AGTCCAGCCG	CGCAGAGTCC	GACAGCACCA	GACAAAACGA	GCATGACACC	AAGCGCACAT		5520
CCTCTCATCG	AGTTTCTCGA	TCCTCCCCCG	CAAAGCGCAC	CACCACGAAC	ACACCCCCAT		5580
ACCACCGGTC	CTGGCGAACT	CGCAAAAGCG	CGGCACACCC	GAAACCCATA	CCGCGCACAG		5640
CTTCGGGATA	TGCATGCGCA	TGCTAAAGGG	AAACCTGTCC	TCCTGGCAGA	CTTCACTCCT		5700
CCACAAAAAA	AACCGATACG	AGGGCGGGGA	GTATAACGCG	CAATGCCGAG	TGCACAACAC		5760
CTGTCAAGT	TTGCTCGCGA	GCTCAAGACT	CTTGCGGAATG	AGCCAGACAC	CCTCAAATCT		5820
TGGGGTACTC	TGTACGATGA	CCTACCACCT	CCTGAATCTA	CCCCCGACGG	GGCACAGCCT		5880
GCGCCACGCG	CTGAGCGGCA	GTCCGCGCCT	GCATCCGCGT	CagcTTCTGG	CCCTGTGTCC		5940
GCACATGGGC	AGCGCcCCTT	TGAGCCTGAC	ACAGAAGCAT	CGAGCGTTGC	CTCGGGAGAG		6000
GAGGTCGTGC	AGGAAGATGC	GCACGCACCA	CAGACTCGAA	TGCATGACTC	CGCACAGGAG		6060
CCAGCGGCGG	AGATTTCTCT	CTTTTCTGAA	GAGCGGACAC	CGGAAACTAT	GCCGACTGCT		6120
GCCTGGAGTG	CACCACCGGA	TCCTCTTTTT	GAAACCGAGC	ATGCTGTCCC	CCCCCTACCT		6180
CTTGACCCGG	AAGAAACACC	AGTGCCCGGA	GAAAAAGGTC	TCCAGGAGTC	CGCCGTGCAG		6240
GAGGAAGACG	CCGGATTTAA	CCAGATGCCT	GCGACAGGAG	GGCAAACCAG	CGAGAATCAA		6300
CAACACTTTG	ACGCATTGCT	CGCCTCTCTT	GATCTTGATT	CGGCAAATGG	CGAACGCGTG		6360
GTCCCCGAGA	ATGCAGATGA	GTTGCGCGCT	CAGGTACCTG	AATCCCTTCT	AGAAGGGTTG		6420
CATCCAGAAG	ACCAAGAGAC	GAAACGCTCG	CAAGAGGAAC	CTGTATCCTA	TGACTTCCCT		6480
GCGTTTGATC	TGGACCAGGT	AGCGCCTCCT	ACACCAGACG	CCCCTGATTC	TTCTAACTCT		6540
GCTCTCACTG	AGATTGAAAT	CACCCAGCG	CTCTCTGAGC	ACCCACGCA	GACGCAGGAA		6600
ACGGGTACCA	CCTCGCCACA	ATCGCAGACT	GTGCACGCTG	ATGCGTCTGC	CCTAGGGCCT		6660
AGTGCCTCTG	ATCCTAATTT	TTCCCCGCGG	TCTGCGGATA	ACTTGGTCGC	CCAATTCCCC		6720
ATTGAAGAAA	GCGTGCAGAT	ACCTCCTTTC	CCCCTGATG	GCTTTGAACT	TCCCGGTAAA		6780

TTCCAAGAAT	TTGCGAGAGA	ATCTGAGAGC	CCCTATTTCA	GTCcTGATAC	AACCGCCGAC	6840
GCAGACCAAG	CACAGACCAT	AAGCGAAACG	GAATATCAAC	GCTTTCTCCA	GCGGCTCGAC	6900
GCCCTCCCC	TTCTGTACG	TATTGCGGTT	CAAGAATACC	TGTCCTCAGA	GGAGACCTCG	6960
GACAAAGAGG	GTTATGCGCT	CATTAGCAGC	ATTGCAAACA	ACGCCTCGCC	AAAAGCGGTT	7020
GCTACTCAAC	TCGAGCACAT	TCTAAAAAG	CCGCTGCATA	TTCCCAGAAA	GTTTGAACGC	7080
AAGTCAGCTG	CCGCACACGA	ACGCGAGAAG	TCTTCCCTTC	CCTACATCGC	GAAACACACG	7140
GTGCTTCCCC	TGACGGCCAG	CTCAGCGGCC	ATACTCATTT	TCATCCTTTC	GCTTGCAGTC	7200
CTCTCCTGGC	ACTTTCTGTA	CAAACCCCTT	CATGCGCACC	TGAGCTACCG	CGCAGGGTAC	7260
CATGCATTAG	AACTGGACCG	CTACGAAGAT	GCACACACTA	ACTTTGAACA	CGCCAAACAG	7320
TACTGGAAGA	TAAAAACTG	GTACTTTCGT	TATGCGCGTG	CCTTACGTGA	CAAAAAACAA	7380
TATACACGTG	CTGAACAAAT	TTACACCGAG	TTACTCTTTG	ATTTCCGGCA	TCCCAAACAG	7440
GGGAGCATTG	AATATGCGCA	CATGCTCTGC	AATGAGcTGC	GCAAATACGA	ACAGGCAGAA	7500
ACGACAtGCG	TCGGCAGGGA	CTCGACCATC	ATCCAAATGA	TCCTGATATC	CTCAGCGCAC	7560
TCGGAGACGT	ATATCTAGAG	TGGGCAGAAG	AGGACCCTGC	TCAATACGAG	CAGGCTCGAA	7620
AAACATACCA	ATCACTCATC	GCTTCCCACG	GCACGCGCGA	TGCGTATCTT	GCACGCATGA	7680
TGCGCTATTT	TATCAGAACA	GATCAGCTCG	CGCAGGTACT	TCCTCTTAAG	GCACACTTTA	7740
CCAATACGCG	CGCTAGGATC	GCTCCTGAAG	ATTTGACAGA	ACTCAGTGGA	TACCTTTTAG	7800
AGAAACGCTA	TGAATCTCAA	CCCAGTGA	CCCTTACATT	GCAGTCAAAG	ATTGAGGATC	7860
TGCGCGCATT	ACTTGAGCGG	GCCTTTAAGG	CGGATCCTAT	GTCTGCGGAT	GCGGCTTATT	7920
ACCTTGGA	ATTCTTTGTC	TACAATCACC	GCAAGGACAG	CGCGCGGGAA	CTCCTTCAGC	7980
AAGCTGTCAA	CCGTTACCCG	CACATGCCAC	ATTCCACAGT	CAGGCGTACa	CTGCGTGAAA	8040
TTGACGCGAT	GCGCCTGCTC	GGTACGTTAC	TCCTGGAGGA	AAAGGGACAC	GCTGCTGCCC	8100
GCGAAATATT	CACCCAGGCA	CTTACGCGcT	ATCGCAGCTA	TATCGTAATG	cGTGaCCTAC	8160
CGCCGcATCG	GaCTATTGGA	AAACTGTACC	GTGaCTATGC	AGATATGGAC	TACTTTATCT	8220
ACAAAACTA	TGACTCTGCG	TTGGAGCACT	ACCAGCATGC	GCGGGCGCAG	TTACTTGATA	8280
CTCCTGAGGT	TCAATACAAA	ATAGGGTATA	TTCAGCACAA	AAAAAACAAC	TACCCCGAAG	8340
CGATTCGGGC	AATGAATGCA	GCGTACGAGC	ACAATCCTCA	GGATAAGCAC	CTTTTATATG	8400
GATTCGGCAC	CCTGTTGTGT	AAACGTGGTG	ACTACTTTGC	TTCCCAGGGG	TACTACGAGC	8460
AGTTACTTGA	ACTGTTAGAT	GCGCAGcGTA	CAAGACGCGG	TGTCATGCTC	CCCCACATAG	8520

AAAAGGCGGA	CGCCGCGTTT	GTTGATTTGT	ACATGCGCAC	GTGTAATAAC	CTGGGCGTAG	8580
TATTGCACCG	TTTGGCAACG	ACTCATGGAG	ATTGCGGAA	AAATGCACGG	GCGTTAACTC	8640
TGTTTGCAGA	ATCCTCTCGT	GCATGGGACG	CACTCACCCG	TCACCCTGAA	ACCAGGGTGC	8700
GCTCACAAGC	TACCGGTCTT	TCATACCTAA	ACGTCCATCA	CATGACACGC	CCCTACACAG	8760
AGTTTCAGCC	AGAACTGTAC	GACGACATTC	CTCTCCTACT	TGAGCACGAA	GAACCGCCCA	8820
TCCAAAAGGA	ACAAGAGAAC	TAGCCaACGG	TGCCCCGCTTG	CCTGCATGAC	CGAAACAGGG	8880
TAGTCTCCCC	TGAGAGGAGG	CGACTGATGG	GAACGTACAT	GTGTGATTTG	TGTGGCTGGG	8940
GATACAATCC	AGAGGTAGGG	GATGCAGACG	GGGGCATTCC	CGCGGGTatG	CGTTTGAGAA	9000
CCTACCGGAC	CACTGGGArT	gTCCACTCTG	TGGGGTGGAC	AAGACAAGTT	TTGTGAAAGT	9060
GTAGCTCTTC	TGCCTAGAGG	AAAGGGGAAC	GATCCAGTGA	AAAAAAGGA	CGCTTTCGTC	9120
GGTACGATCG	GCTACGACGG	TCAACGGGCA	GTAGTGGACA	GGGCCCCGCT	GCTGAAGCAC	9180
AGCAGGAGTT	CCCTGCAGGA	ACTTCTCAGT	GCGGGGGCCT	TcCGAaGAAG	gCGGCTGCCT	9240
GmGCCGTTTG	GGAACGCTCG	AmArAAGCAC	TGGAGGCCGT	CGCCTCCGCC	TACAACGCCC	9300
GCTCAGGGAG	CAGGTACAGC	GCGCAGGACA	TCGCAAAAGT	TTTCGGCATT	GCCTCCGAAC	9360
CAGGGGAAAA	GGCGGTTGTC	CTCTAGCCGC	CTCCTCCTTT	GCTGAAGATC	CTGCACCCCC	9420
TCAGGCTTAG	CCTGAGGGGG	TGCAGGnTTT	CCCACTACCA	ACTTTCCTGG	CGGATAACGT	9480
AATCGTGAAA	CCTTCCCCTT	TTCAGCGCGT	GCTTTACCCCT	CTCTAGGnTC	CGCGGGGCGT	9540
ATCCCCGGcA	GCACCACGCG	CACCGcGTgC	gTCTGTTCGC	TCATATGAAG	GATCAAAGCC	9600
CGCCTCGCGC	ACTTTAACTA	CCAAGCGGAC	ChATTCTCCT	CACGAACAAA	GGCTCCCAAC	9660
TGTATACGCC	AAAGCACCCC	CCGCGTTTCC	CCCGAATGGG	TTGGCGTATA	CACCGACTTC	9720
ATCCCTGACA	CCTTCCC GCC	ACCAGCTGCG	TAGGGAAGAG	GCGCagCAGC	CGCATAGGAA	9780
GAAGACGAAG	GAACAGGCTG	CGCGTGCGAG	TTAGGTGCAG	CGGAGCCAGG	CACGGCCGTC	9840
CCATAGGGAA	CCCGACTGGG	AGTCGAACCC	GGTGCTGCGT	ACGCGACAGG	CGGCGCACCA	9900
TACTCCGAAG	CGGGGACATC	CGTTGTATTTC	GCCACTCCCC	GCACACCCGG	AGTTCCAGCC	9960
CTCCTTCCGA	CAGGAGCTGG	CGGTGGATTA	TGAGGATCCG	CATACATGAC	AGGCGCACTG	10020
GACGTGGGAG	CAGTAGGCGG	AACACCAAAG	GAATCTTGAG	GTAAGACACC	AGGAGAAGTC	10080
TGCCTATCGT	TGCGTTGCTG	TGAAGCGTGC	GCATTCCGAT	CTGCCTTGTC	TATGGAGACG	10140
CGCGCCACCC	CCGCGTTCAG	CATGTCTAAC	GCAACAGCTG	CAGCCTTTGA	CACGTCAATC	10200
TCTCTATTTG	CAGCGTAAGG	TCCCCGATCA	TTGATGCGCA	CGATTACCTT	TTTGCCGTTG	10260

TCCAAGTTCG TCAACTCCAC AACCGTACCA AAGGGAAGCG TCGGGTGC GC CAGTATAC 10320
GCGTTCATGT CAAAAATCTC CCCACTTGCG GTAGGTCTTC CGTTAAAAGA CTCCGCATAG 10380
TAGGAAGCAT ACCCTTCCGG AACGATTACC TCGCCGGCTG CAAAAAGCAT CTGCACGTTC 10440
CACAATACTG CAGCCACTGC AACGACACGC TTGTCCATCA TTCAACACTC CTCCCAAAGG 10500
CTTCACCCGA GCAAAACGAT GCTTCACAAG ACACCCCGA CGCTTATCGG AATATGGACA 10560
AAAAGGTTGA AATCTTTTAA GG TAGGGGCG CAGTGGGTTG CTGGAGACGA GACTTGA ACT 10620
CGTACGACCG CTGCCGGTCA AGGGATTTTA AGTCCCTGAT GTCTACCAAT TCCATCACTC 10680
CAGCGTTGTG CGGCCGTGCT GCCACTGTAG CGGGTAAGTA GCCGGGAGGT CAACATATAC 10740
AGTGATTGCG ACTGCCACCT TGCCTGCTT GTAAAGCAA GTGAGGATCC TCAATCCCTC 10800
TTCAGACAGC TGGACCTTGC ACGCTTCCCG TTTCTCATGG AGGTCCGTAC GCGCGCAGGG 10860
GATTATCAGG AAAGAAAGGC TCTGCTCCTG CAGGCCTGCG CGGGGCGCTC GCTTCCTTCT 10920
TGTCTGCACT TCTCTGTAGG GGTCCGGCCT GCGCCGAGC CCATTGCGCA TCCTGAGACA 10980
GCCCTTTCAC TGCTTCGGTC AGACGTGCGT GCCCTGTGCG CAGAACAGGC GCCCTACCGA 11040
GCCTTGGGTG AATGCGGTCT TGACCGACAC TGGAAATGGCC CTCAGGTAGC GTGCAAAGCA 11100
CGGAAAGGAT CTGGTGTGCG CGGTACACCA GATCTTGATG CAGAGGAGTA TCTTTTAAAG 11160
GCACAGCTCT CTATAGCGAA AGCTCAGAAC CTGCCGTCA TCATTTCATTC ACGGGACGCT 11220
TTTGAACCGA CACTCCGTG CCTGGACTCA GTGGGTGGA GAAAGGGTGT GATGCATTGT 11280
TTCTCGTACG GATCGTTGAG GCACAGCTT TTTTAGAACG TGGTTGTAC ATCTCTGTG 11340
CAGGCACACT TACGTACGCA AAGACGACAT CCGAACTTCT CGCGCGCGAT GCGCTTTATT 11400
CGGAGTATCC CTCTGGATCG TCTATTGTTA GAAACGGACA CTCCCTACCT CGCTCCAGTA 11460
CCGCATCGAG GAACACACAA CAGACCCGAG TATGTCCGAC ATACCTACGC GTTGGT 11516

(2) INFORMATION FOR SEQ ID NO: 38:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 2450 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

CACGCATGGG CGCAGACATt GGgTtCATTG GAYTTGCTGT CATGGgAGAG AATCTGgTTC 60
TCAACATgAG CGCAACGkTT TTTCCkTCGC AGTTTTCAAT CGCACCAcCA mGGTGGTCGA 120

CCGATTTCTT GCAGGGCGCG CTCATGGCAA GCGAATCACC GGCGCCCaCT CCATTGCAGA	180
ACTTGTTTCA CTTTGGGCAC GTCCACGCAA AATCATGCTC ATGGTCAAAG CAGGCAGCGC	240
AGTCGATGCG GTCATTGACC AGATACTGCC CCTTCTAGAA AAGGGGGACC TCGTTATCGA	300
CGGTGGCAAC TCTCATTACC AGGATACCAT CCGGCGCATG CATGCGCTAG AGGCCGCAGg	360
TATTCATTTT ATTGGCACAG GAGTTTCGGG GGGAGAAGAG GGGGCCCTCC GTGGACCGTC	420
CCTCATGCCT GGAGGCTCTG CTCAGGCTTG GCCGTGGTT TCTCCCATT TCTGTGCCAT	480
TGCCGCCAAA GCCGACGATG GCACCCCGTG CTGCGACTGG GTCGGCAGTG ATGGCGCCGG	540
GCTACGTGAA AATGATTAC AACGGCATTG AGTACGGCGA CATGCAGATA ATCGCCGAGG	600
GCTACTGGTT TATGAAGCAT GCGCTGGGCA TGAGCTATGA GCACATGCAC CATACTTTA	660
CCCGCTGGAA CACGGGCCcG CTTACACTCG TACCTGATTG AGATTACCGC GGCTATTCTG	720
GCACATCAGG ACACAGACGG CACACCACTT TTAGAGAAAA TTCTAGATGC CGCTGGACAG	780
AAGGGGACGG GCAGGTGGAC GTGTGTTGCA GCGCTCGAAG AAGGCAGCCC GCTTACACTG	840
ATCACAGAGT CAGTGATGGC GCGTAGTCTT TCTGCGCAA AGCAAGCGCG CTGCAAGGCA	900
CATCGCGTTT TTGGTTCTCC CGTGAAAGTC TCCAAAGCAG AAACGCTAAG TGCACAGCAG	960
CGCGAAGAAC TGGTGTCTGC ACTGGAAGAC GCGCTGTATT GCGCGAAAAT AGTCTCGTAT	1020
GCGCAGGGTT TTGAGCTGTT ATCGCATACG GCAAAGCGCC GAGGATGGAC ACTGGaTTTT	1080
TCCCGGaTTG CATCGCTGTG GCGTGGCGGG TGTATTATTC GTTCAGGATT CCTGTCCAAG	1140
ATCAGTGCGG CGTTTGCTCA GCAGCACGAT CTAGAGAATT TGGTACTTGC TCCCTTTTTT	1200
GCAGAGGrAT TAAAGCGTGC GTGTCCAGGC TGGCGCACCA TAGTGGCAGA ATCGGTACGG	1260
CAGGCGTTGC CAGTTCCGGC CCTCTCTGCT GCGTTACCTG GTTTGATGGG TTCACCGGTG	1320
CTGCTTTGCC GGCCAACCTC CTTCAGGCAC AGCGAGATTA TTTTGGTGCG CACACCTACG	1380
AGCGCACAGA TGCGCCGAGA GGAGAGTTTT TTCACACAAA CTGGACAGGC ACCGGCGGTG	1440
ATACCATTGC AGGAACCTAC TCAATATAGG GGATCCTCCC GTCGCTTGCC TTTCGTTCTA	1500
TATTTATATT CCCAGGTGAT CTTGACACCA CCTCGGGTGC TGCCTAGca TGCGCCCGTC	1560
CGGCGGATGT TGTATAACGG CTATTACCCC AGCCTTCCAA GCTGGAGACG TGGGTTTCGAC	1620
TCCCATCATC CGCTTTCCTC CCTACCTCGT TGATTTTTCT GTTCTATACG CGCTACACTC	1680
GCCCCTCGGA GGGGTAGGGT GCATTCTGGG CAGCAATTaC TtGAAAAGAA CAGTATTATT	1740
ATCAGCGGTC TTCCCCCTG GCGCAGGAG TTGTCCAAGA AGTATTGCTC TAAAACGGTC	1800
AATcTGATtT CGTACATGGC AATATCCGTG ACTTCCTCCC CCATCGCGAT ATTCAGGGCA	1860

GCTTCTCCTT CGTTTCGCATT AATGACTACA TATCTGAGGT TATCTTCGGT AACCGGGTA 1920
 TCATCGTCTT CTATGACAAA TCTGCAGGGC TCACATTTTG TCTACAAGAA ATGCTGAGCG 1980
 CTTACTTAGA GCGTATGCAT GCCCAGTATC CTA CTGAGGC ACTTGCTGAC TTTCTTTTCGC 2040
 GTGATCCGGT GAAAGCTTTT GCGTACCTTG AGCGCTACTT TATTATGAAC ATGAAACAGA 2100
 ATAAGCGTAT GGTCCCTCATC ATCGACTATT CTGAATCTCT CGTTCCTCA GAAGATATTG 2160
 CAAACTTAAG CGAAACAGAT CGCTATTGCT TCGTCACCCT CAATCGCTGG GCAAATGATC 2220
 CGGTGTTTAC AAACGAAGAC ATATCCGTTG TGATGCTCAC GGAGAATATC ACTGACATCA 2280
 ACAGTCGGTT CACCGCTTCT CTTCCACCG TTAAGATTCA CATACCCCTG CCAAATGAAG 2340
 AAACACGGAT ACGCTTTCTT GAATATCTCA AAACCCAGGA GGAGATTTTA GTACTTGAAC 2400
 GTGGGTTGAA TACGGAGAAA ATTGGCAAAC TCACTTCCgG TTTGAATTTA 2450

(2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6426 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

AGCCTTTTGC TGCCGTCAGA GGACGTGCGA ACTTCATAGG TGCCCGTTTG GAAATTACGT 60
 ACCACACGTG AACGACCGGT GGTGCAGCTG TAAACTGCAG CACCACGCTG TACGTACTGA 120
 GGGATTTTCGT ACGTCACACC GTCATCAGCG GTAAATACG CnCGTGCGCT GCAAATGCCA 180
 GCGCGTCATC ACGCCAGTAC CGAAAGCGGT AAAAATTCGC CTCGGTGAAG AAAAAGGCAT 240
 TCAGTTCTCC AGGCGCCTGG CTAGAATACG CACGCAACGC CTCAGCAGAC CCTTCCTCAA 300
 TCCAAAACC AAAAAGAGGA TCGTCTGTTC TCACGGGAAT CTGCTCGGAC GAGACGGACC 360
 CGGAACGGGT ACCATACGAT ACCCGCTGAA AAAAAGAGCA GAACAGCGCG TCCCCCAGC 420
 GACACAGAAC GAGCGGyTGC ACACGCACAC GCCCTCAAA CGACAAGACA AGATCCACCC 480
 GTTCTGCCTT TTGCGCCGCA GGGGGCGGCA GCACATCAGC ACGAGCATCA GACAAAGATG 540
 AAAGGGAAAA GACAGCCACG CGTTCATACA CGTACGCATA ATACGGCTTG TGCACAAGCA 600
 TGAGCGAAAA ACGCATCGCA TCAGCAGTAG GAGCGATAgC AACGATAcGC GTGGCGTTCT 660
 CCCACACCCC TGCCAAACGC GCCAGAGCAG GCTCAGCTGC CAACCCACC TGAGTACTGA 720
 GCACGCACAG ACGCACCCAC GCGCTCCACC CTTTCTCTGT CATACCGCGT AACCGGTCAC 780

TCAAGCGGCG	CAAAATACCC	TGTCTCGTCC	CGCCCCGAAC	GGCTCAAGAC	GCGCACTTCT	840
GCCTCCACCG	GCATATATGC	ACGACCAAAA	TCCGTCGGCA	ACCGCGATCG	ATACGACAAT	900
GCATAGGTGc	CCCGctGCGC	CTGAGCGCAC	GTGCGCCACA	AGAGCCCCTA	ACCCTTCTTG	960
CGCATACACT	GAATACACCG	CACCCCTTGT	CTTTTGAACC	AGATATCCAA	GCTCCACGGG	1020
CAATACCGTA	CGCTGAAGCT	GTATTACGTA	AAAGCTCGTT	TCATTATTCG	TCAAATATGC	1080
AGCCAAGTCC	GTCACCCCAT	ATTGTGCAAA	ATCCTGTGTC	TGCAATTAC	CAAGAGACAA	1140
GAATACCACT	GCGCGCTTGT	AATCTGCGTT	CACCAGCGTG	CCTGCCGCAA	GACGCAGACC	1200
CAGATCAAAA	CGCCACTGCG	AAGAACTCTT	TGCTCTTAGG	CGAAGcGGTT	GCGcCTGCAG	1260
tGCGCCGCAG	TGAAGGTGCC	TTCCAGCACT	GGTGA CTGTG	CCGCAGAAAC	TACCGACAGC	1320
GTCCCTGTGT	CCCCCACC GC	TTGTGCAAGC	TCACCAATCA	CCCGTGTAAC	CAAGCGCATC	1380
TCCTGTCTCG	TCGCAGGAGA	GCGGTCCACC	AGTATACTGA	GCGAACAcGT	ATCGTTCAAA	1440
TACGCTGCCC	CcTGCAGACG	CATCTCACTT	ACCGGCCGGT	GTTCTTCGGT	AAGAAAAAAG	1500
TTGGAAACGT	CCAATCCCAC	TACCGGCGTC	CCCTCACGCG	TGTGTACCGA	CACATTACAA	1560
GTAACGGAGG	GAAACCGGTC	GGCGTGCAAC	CGCTCAAAAT	GCACAAACAG	ACCGCCGGCA	1620
AGCTCAGAGA	TACGCGAAAC	AATCTCAATC	CTTTCGTTT	TATAATCGGC	AAGGAGCACA	1680
TTGCCATTTG	CATCCGGAAC	TGCCGCCGTT	AAGCGAATAG	GCGCATTTC	CAAACGGGCA	1740
ATCGTGTGCA	AGGACGCGAG	TCCTACATCC	ACCACCATGA	CCTCATTTCG	GAGAGACACC	1800
AACAAGCGTC	CATTCCACGC	CCGCACAGAT	TCAACGTGCT	TGAGCGTCCC	TTCCGCAACG	1860
AGGGTACGCA	CATAATTTCC	TGCCGTATCA	AACACGTAAA	TGGCGCCCTT	CAGAGCATCT	1920
GCCACGTACA	CTAGCTCATC	GAGAATGGCA	ATGCCGCCCG	GAGCAGAAAA	CCCAAAGAAG	1980
CGCGCAGACT	TCTGCCCAAA	ATGGAAGAGA	GGAGACCACAT	CAGGTGCAAA	CACCGCCACA	2040
CGCGCATTC	CAAAATCTGT	CACGTAAATG	TTATCGTAGC	GATCAGTGGC	CAAAA ACTGG	2100
GGGCCGATGA	GTTGTCCGAC	GCCTCTCCCC	TTTCCCCCAA	ATGACTTGAG	GAACCTGCCT	2160
TCCTTCGTAA	GACGACAAAT	GCGATCAGAG	GCAAATTCAG	AAACGAGCAG	ATCGCCTGAG	2220
CGCGTCTGAA	TAACATCAAA	AGGACGGTCA	AAACCCTCAA	CGGGCCCACG	CGTACGcgCA	2280
ATAACACGTC	CGTTCACGTC	AAAGCGAagc	AGCTCGTTAG	AACCGTATGC	GCTCATCCAA	2340
AACGTACCGT	cAGcTAACGC	ACACAAAGAT	AGTGGTCTGC	GGAAAAGAAC	CGTTCCCCGG	2400
CGTACAGCAT	GAAACGATTC	ACTTTCGCTA	AAGTGCAGCG	CGTCTGCTGA	ATCAGGCGCA	2460
AAGTCACGCC	GCTGCTGAAC	CACCTCTATC	TTGTTCCGAA	GCAACGCGCC	GCCGTAGCCT	2520

AGATCCCGCG	CCGCGCCCCA	CTGGTGcAGC	GctGCGCCTT	CAATCCCAC	GCGGTAGTAC	2580
GCATTCCCCA	ACCACTCAAG	AATGAGCGGA	TTACGGGGAG	CAGCAGAAAG	CGCACGCTCA	2640
AACAGCTGGA	TAGCATCATT	GAACGCACCC	CGGTAATAGG	CCAAAAC	TCC GCGCGAAAC	2700
TCCCCTGCTG	CAAGTGCTGT	ATCACGCACA	ACCGGTGGCG	CATGCTCCTG	CGCCCCCACT	2760
GCAAAAAGCA	ACAGCAGCGC	GCCTGCGCAC	CCCACAGATC	GTCTACTCAA	ACACCAACCC	2820
CCTCTCAGTG	CCTTTCAGCG	CAGTCTCTTC	TTTCTCCAGA	AAGCTCACAA	AAGGTGCACA	2880
AACAAAAAGC	AGAGAGAAAA	AAGGAGCACG	CAGGCCAAGA	CAAAGAGACT	ACCTCGAACA	2940
GACGCACACC	ACGCCCTATC	CTCAGTACGA	GCAACAAGCC	TGGAACGCAA	AATCCGGCAA	3000
CGGCAACACA	GGAGGCATTG	AAACCGGCTG	CGCATACACA	AGCGTAATCG	CAATGTCACC	3060
ACGCATTACA	ACCGCCCAAT	CGCTGTCTTG	CACCGCGCCT	GTATGCGCCG	CTCCACCCTG	3120
GTAATAAAC	ACGTGAGCAA	GGCCCGCCTG	GCGCACCGCC	CCACGTTCTT	CATATATCCG	3180
ACGcGCAACG	CGCGCtAACA	AGCACGCGCA	TACGCCTGTG	CCGATCGCGC	GTTTATGTTC	3240
ACCAACACGT	CCTCGGAGGA	AAGTGCAGCC	AACGCCCCGA	CGTGACGCGC	CACAAAGCGG	3300
GCAAGCGCCT	GGAAACGGCA	GCCTGTTCCA	AAATCAGAAA	CGGGCAACAG	GCTCGCTGCA	3360
ATCCCCGCAA	TCCCATACAT	CACCGCCTGC	CGTGCTGCGG	CAACCGTTCC	CGAGAACACA	3420
ATATCAGTCC	CCAGATTCTC	CCCTTCGTTA	ATTCTTGACA	CCACCACATC	CGGCGGTGTA	3480
CCCACGCACA	CCTGGCGTAA	CGCGCGATTG	ACACAATCCA	CCGGCGTCCC	TGAGCACGAC	3540
CAAATACCTG	GCTCCACTTC	CTTTACGGTC	ACCGGCTCGA	GCGTAGTAAT	CCCATGCGAA	3600
ACTGCAGAAC	GATCTCTGTC	CGGCGCAACT	ACCGTCACCT	CATACCCCTC	AGGCGCTGtT	3660
TCAGCGCCGC	aTGAGCGCG	CGAATGCCTG	CTGCCTGATA	CCCATCATCG	TTTGTCAGTA	3720
GTATCCTCAT	AACACCCGGG	CCCCCTCAGA	GCACTGTACC	TCATACGCCG	CTGCTTTGAA	3780
ACCGAAGATG	CGCTCGTACT	CGTCGAGCCT	TTCTAGGTAC	GGCTCAAAGT	CTTGATCGCG	3840
CAAAATCGCA	TAGGTGCACC	CACCAAAGCC	CCGACCCGTG	AGGCGCGAGC	AGACCACATC	3900
CGGCGCATCA	GGATCTACAA	ACTCAAGCGC	ACGCTTCACC	AACCAATCGA	GTTCTGGACA	3960
AGAAATTTCA	AAGCGGTCCC	GCAGGCGCTc	ATGAGAGCGG	TTCCTACTC	TTGAGAACGC	4020
AGCAAAATCC	CGCTTACGCA	GGGCTTCAAT	CGCCTCATCA	ACGCCCAGCG	ACTCGCGCAC	4080
CAAATGATC	ACTCGCCTCC	GTATTCCCTC	AGGCACATCT	ATTTCCTCCA	ACGCTGCTGC	4140
CaTGAGCTTA	GACATAGCGC	GAGGCATATC	GGGATTGCGC	TTACCAATT	CATAAGCATC	4200
CACGCAACGC	TTCAAACGCG	CGGTGAACTC	CTCACGCGCG	ATGAAACGGG	GAACACGCGA	4260

GTCAGTAAGC	ACAATACGCT	TCCCCTCCGA	GGGAAATTGA	CACAGTTCCG	CCTGCTTCTT	4320
GCGGTGATCA	GTGCGCACGC	AGCTACCCTG	CTTTGCAAAC	AACACGCACA	GAATATCCGC	4380
GCGATGTGCG	TGGGTCTTGA	GATAGCGCTC	ATTTGCGTGT	TCCACGATCG	AAACAACACT	4440
TTCTTTTGGC	AGCGTAGcGG	CAAACAACCT	TCCAAGCACA	AGGGCCATGG	CAACCTTCAG	4500
CGCATTGGGA	GTACCCAGCC	CCGCATCAGG	AGGAATCTGA	GAAAGGATAG	TGCAGTTCAA	4560
CCCCGTCAGG	TGATACCCAC	CATCCATGAA	GGAGAGAATG	ACCGCCTTTA	CCGAATTAGC	4620
CCAGCGATCC	TCCTTACGAT	AGCGTAAATT	AGCGGTGGAA	ATCTTCCTCC	GCTCCCCAAG	4680
CGTTAAGGAG	AAAAGGCGAA	AGGTGCTATC	CTTTCGGCGC	GAGACACACA	GCGTAAGGGT	4740
TTGATCGATA	GCCATCGACA	GGGTGTTGCC	CtGAGCAAAC	CACAGATACT	CCCCCAACAG	4800
GTGAAAACGA	CCCGGAACGA	CTGCAATCGC	CTCAGGCTCG	TCGCCGTACT	CCTCTGTGTG	4860
GCAGGACTCT	AyCcCGTGCA	TGCGCAGCAT	CATAGcCAGT	GTATTGAAAT	AATACAACAA	4920
AAATGCTTTT	CTGGCAGGGG	AAAGTTATGC	TTTGCACAGC	GCCTCTTGTT	TCAAGCGCCG	4980
CCTCGGCGGT	GCTCTTGCCA	TTTGCGATTC	CCAACGAGTT	TTGGCTCGCC	GGTTCCTCCG	5040
TGCTAGGGTT	GGGGGCGCTT	GTTCCCTTGT	ACGTTGGATT	CCTCCTCTCC	CCTGCAAAAA	5100
AACACGTTGC	CTGTTCTTAT	GGGCTGTTTC	TCGCACTCGT	GCACGCGTGT	TCTAGCTTTT	5160
GGCTCAAAAA	CTTTCAGGGC	TTGCGCTCT	TCACCCTCGG	CGCATCAACT	GTCGGTTACT	5220
TCTTCTATGC	GCTTCCTTTC	GGCGTAgcGT	tCGCATGCAT	CCTGCGCAAg	CaGGCgCCCC	5280
CGCGTGCCTG	CGCTTTTGCG	CTCGTGTGGA	CCCTCTGGGA	ATGGGTAAAG	TCAACCGGTA	5340
TACTCGCCTA	CCCGTGCGGT	ACGGTCCCTA	TGACCGCGCA	CAGCCTCTCG	CACCTCATAc	5400
AGATAGCTGA	TATCACCGGC	GTCTGGGGGC	TTTCCTTCCT	CATCCCGCTC	GCAAACGCGT	5460
GCGTTGCAGA	AAGTCTCCAC	TTCTTCATAA	AAAAGAGAGA	CAGCGTCCCT	GTGTTCCGTC	5520
TCTGGCTCCT	CACCGGCTGC	TTGTACTGCC	TGTGCAGTCT	CTACGGTGCC	TACCGCATCG	5580
CCACCCTTGG	GGCTCCACGT	ACCACGCTCG	CGTTGGCAAT	CGTACAGCAA	AATGCAGATC	5640
CGTGGGATAC	AACTTCCTTC	GAAAAAAACC	TCACCACCGC	TATACATCTG	ACTGAGACAG	5700
CCCTTCGTAC	GCAAACAGCT	CCCCCCTGc	CGACTACTCC	CTACAGAAAA	GAAAAAACAC	5760
TCACACACGC	TTCTGCGCgC	GCACCTGTcG	ACATGGTGGT	TTGGAGCGAG	TCTAGTCTGC	5820
GCTATCCGTA	CGAACAGTAC	CGTCACGTGT	ATAACGCATT	GCCAGCGGcA	CGACCTTTCT	5880
CGGCGTTCTT	GCGCAcGCTC	GGCGCGCCCC	TTCTGGTGGG	AACCCCTTG	AGACTGTCTG	5940
GTAACCTCAC	TAAAGGTGGA	TACGCCAATG	CAGTGGCCTT	GcTCCGCCCA	GACGGGCACG	6000

TGGCGCAGGT ATATGGCAAA ATGCAGATGG TGCCATTTGC AGAATTCATT CCCTGGGGAC	6060
ACATGACATC TGTACAAAGA CTGGCGCAGA TGCTCGCCGG CTTTTCGAA AGCTGGACGC	6120
CAGGGCCAGG GCCGCGCTTG TTTTCATGTGC CGTGCGCCGC AGAGGCAGCG TCGCTTCGC	6180
AACTCCCATC TGTTACGAAG ATGCCTTTCC TTCCCTCTGC GCCGCTTTGC ACACACAGGG	6240
GAGTGAGCTC CTTATTAATC TTACGAACGA CTCTTGGTCA AAAACTGCCA GCGCAGAGTG	6300
GCAGCACTAT GTTGTCTCTC TTTTTCGGGG CATAGAGCTG CGTACCAACC TCGTGCCTC	6360
TACAAAnTCT GGCTATACCG TCGTCATCGG nCCAGAGGGA AAAAnGCGCG CCGGTTTTCC	6420
GTTGTT	6426

(2) INFORMATION FOR SEQ ID NO: 40:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 2190 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

TGTGCGCAAC AGACAAACAC GTCCGGCAGG ACGTACTTCC ACAAGnAAGC GTTCCGTCAC	60
GCCACAGGGG TAGGCACCAG GACGCGCCAC GTAGATTGCA CTCACTCCTT GCTTTTCAGA	120
GGAAGGAGGT GATCCTGCAT CCTGTTTCTT TGTCTCACGT GCTGTGTCCG ACGCATGTAT	180
GCAGTGGAAC GAAAACTCAC GTTAAGGGAT TTTGGTCATG AGATTATCAA AAAGGATCTT	240
CACCTAGATC CTTTTAAATT AAAAATGAAG TTTTAAATCA ATCTAAAGtA TrTaTGrGTa	300
AACTTGGTCT GACAGTTACC AATGCTTAAT CAGTGAGGCA CCTATCTCAG CGATCTGTCT	360
ATTTCGTTCA TCCATAGTTG CTGACTCCC CGTCGTGTAG ATAACTACGA TACGGGAGGG	420
CTTACCATCT GGCCCCAGTG CTGCAATGAT ACCGCGAGAC CCACGCTCAC CGGCTCCAGA	480
TTTATCAGCA ATAAACCAGC CAGCCGGAAG GcCGAGCGCA GAAGTGGTCC TGCAACTTTA	540
TCCGCCTCCA TCCAGTCTAT TAATTGTTGC CGGGAAGCTA GAGTAAGTAG TTCGCCAGTT	600
AATAGTTTGC GCAACGTTGT TGCCATTGCT ACAGGCATCG TGGTGTACG CTCGTCGTTT	660
GGTATGGCTT CATTGAGCTC CGGTTCCTAA CGATCAAGGC GAGTTACATG ATCCCCCATG	720
TTGTGCAAAA AAGCGGTTAG CTCcTTCGGT CCTCCGATCG TTGTCAGAAG TAAGTTGGCC	780
GCAGTGTTAT CACTCATGGT TATGGCAGCA CTGCATAATT CTCTTACTGT CATGCCATCC	840
GTAAGATTCT CACTTCTAAG GCGTTCAGA CTTCCTTTTC CCAAACCTTC TCTCAGGTTG	900

GCCTCAGTGG GCTCCAATCT GGGGCAGAAA AACCAGTACG AATGnATCCG ACACAAACCA 960
GTCTAACGAG CCGGATGATG CGTCACAAAG GATGGAGCAC AAAAGGGAAA CGTTGGAGTG 1020
ACAGAACAGC ATGGCAAAAA CGCGCAGGCG TTGGGTCCGA GCCAGAGAAC TCGGTCGCA 1080
TTAGCnCCTA ATTTTGCAGA ACTCTGTGGC AGCCAGTACG GGAGATAGGA AAGTTGCTCA 1140
ATTCGCAAAAC AGCACTTTTT TCTGACATTC CCAGCCTGTG GCCCATAAAG GGAGGCGTAG 1200
TCACATTTCC ATGGCATTTC GCAAGAACCG ACATCCATTT ACAGGGCAGT GGTATGTACA 1260
CAAGGGTATT GATCTATCCA CTCACCGTTC AGGGGATCCT ATCGTTGCCA CTGCAGACGG 1320
ACATGTGGTG ACGGTAGAAT ACGATTCGGG TTGGGGAAAC TACGTTATTA TCAAGCACAA 1380
ACATGGGTTT TATACCCgCT ACGCGCACAT GCAATCCTAC ACCGTCACCC GTGGGCAGCA 1440
CATCCGACAA GGACAAATCA TCGGTTATAT CGGCGCCACG GGTGTAGCGA CTGGTCCACA 1500
TCTGCACTAT GAAATACATA TCGGCTCTGA CGTTGTTCGAT CCTGGTAAAT ACCTCAACGT 1560
CAAACTGCA GGGGCAGGAT AGTGTCTCAA CAGGATGGAA TACATGGCAA AGATTGAGCG 1620
TCGCTCCATG AACACGCTTA TTGGTGCAGG CTCCCGTATC AGCGGGAACG TTGTTGTCCC 1680
CGGTTCAAGT CGCATTGAAG GGGATGTCGA TGGGGACGTT ATCACTACAG GGCACGTGGT 1740
AATCGGAAG CGngcGcGTG TCCGCGGCGT CATACGGGTA GGGAGCATCA TCGTAGGAGG 1800
AATGGTTGAA GGAGATATCG TTGCGTCAGA GCGGTGCAG GTGCTCCCTT CTGGAGTTAT 1860
TCTGGGCGCA TGCTTACCCG AAAAATTGTG GTGGACGAGC AAGCTTTTTT GGATGGTTTT 1920
TGCTATGCAG TGGCAGATCA AGAGGGATTC AACAAAGTGC TCAAGGCCTA TCTCGGTCGT 1980
AAAAGTATTC ATACGTCTGC GTTTgGATAC AACAAGTACA GCAAGTCAGG ATAAAGCGGa 2040
TGGGATATCG CGTAGGAAAT TCTGACTCTA CGTCTTTACT GTCCGCATTC GCTCCTCCTG 2100
AGAGAGCCAA AAAAAAGTCA AAAGAAAAAC GGCCCTTGCA GGCTGCGCGC TTTCTCTCCC 2160
TCCTATATCC TAAGACGGAn CCGCACTCTG 2190

(2) INFORMATION FOR SEQ ID NO: 41:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6570 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

CTCCGTATAG AGGGCCTGAG TATAGGCACG CCCACAGGG ATTGTCAACG TCTTATGCAG 60